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ETHNOGRAPHIC FILM: THEN AND NOW

[EDITOR'S NOTE: In recent years, anthropology, like other disciplines, has undergone a radical transformation as new intellectual currents have impacted the field. As anthropologist John Homiak explains in the following article, "there has been a shift from objectivity and 'facts' to subjectivity and 'points of view.'" Anthropologists have had to come to terms with the legacy of their discipline's colonial roots, as the world's indigenous peoples increasingly engage in their own self-study and representation. In writing ethnographies and in making ethnographic film, most anthropologists today would subscribe to the belief that understanding

another culture can at best be only partial and always filtered through the lens of one's own cultural biases. In analyzing films shown at a 1993 film festival, Homiak focuses on two major perspectives--the "indigenous perspective" and the "global perspective"--that help explain challenges to and changes in ethnographic filmmaking and cultural representation.]

INTRODUCTION

Time was when ethnographic films were rather straightforward visual documents that depicted ceremonies, socialization patterns, or phases in the subsistence cycles



of small-scale traditional societies. Films like *Trance and Dance in Bali* or *Bathing Babies in Three Cultures* by Margaret Mead immediately come to mind. Such films served as visual illustrations of the concepts or cultural categories about which anthropologists most frequently wrote (e.g., ritual, myth, socialization, or identity).

The authority of these films rested, by and large, not in their images but in the commentary spoken over the image track. For good reason: the images of ethnographic film typically confront us with cultural differences--with scenes of people in faraway places engaged in seemingly exotic behaviors. The sound track carries the burden of meaning by explaining to viewers the significance of these unfamiliar behaviors and events.

Prior to the advent of the subtitling of native speech in the early 1970s, it was usually a "voice-of-god" narration that provided this translation in definitive and unequivocal terms. At times, these narrations even took on an omniscient quality as in the case of films like *The Hunters* (John Marshall 1957) or *Dead Birds* (Robert Gardner 1963). The narrators of these films liberally attribute thoughts to the subjects and seemingly know their every feeling, thought, and desire. Until recently (the last 15 years), this was not a problem for anthropologists because, like the general public, we accepted the conventions of cinematic realism by which these films were constructed. Never mind that the giraffe hunt in *The Hunters* was constructed from footage shot of various hunts, or that the tribal battle in *Dead Birds* was similarly constructed. As long as it was seen to serve the end of ethnographic 'truth,' such continuity editing was not seen as particularly problematic.

This, of course, has made 'authenticity' a somewhat more complex issue in ethnographic film, but we generally assume that unrehearsed 'naturally occurring' events are being recorded. All of this is supported by the unobtrusive camera associated with the documentary mode, the so-called "fly-on-the-wall" perspective that remained dominant from Robert Flaherty's *Nanook*

of the North (1922) until at least the early 1970s. This style of shooting makes an implicit claim to observational neutrality as seen, for example, in such made-for-television films as *National Geographic Specials*, Granada Television's *Disappearing Worlds*, and the BBC's *Under the Sun* series. One of the primary reasons why these visual texts continue to be popular among general audiences is that they appear transparent and objective.

ETHNOGRAPHIC FILM TODAY

CUT! CUT! I WANT CAMERA ONE TO COME IN TIGHT ON THE SHAMAN'S FACE... LET ME SEE THE ANTHROPOLOGIST ACTUALLY TALKING TO HIM...THE SUBJECT HAS TO SPEAK...ALL RIGHT, TAKE TWO...

Today, the encounter between ethnographic filmmakers and what we fashionably call 'the Other' has dramatically shifted. Filming as if the camera were not there has given way to a more frank admission of the fact that ethnographic film entails an encounter between the members of two cultures. In this regard, many films are now reflexive, incorporating strategies of presentation so that the terms, and even meanings, of an encounter between filmmaker and 'Other' are foregrounded as part of the context of the film itself. Now we not only see 'the Other' but we also see the filmmaker showing us 'the Other.' In theory, this serves to destroy any illusion that film is or can be an unambiguous representation of 'reality' by giving viewers access to the intersubjective basis on which ethnographic knowledge and understanding is constructed. This helps viewers remain aware of the fact that films, like written texts, adopt particular perspectives and reflect points of view--rather than express some transparent representation of "the truth."

Many filmmakers now go out of their way to make clear that anthropologists traditionally engaged not in silent observation but in speaking and interacting with their subjects. The filmmaker/anthropologist is part of the plot. Being open about this dialogical process and about the

intentions of filmmakers and subjects alike is also seen as a way to humanize anthropological subjects rather than treating them as examples of abstract or formal principles. This is part of a 'postmodern' turn which, to a considerable degree, has served to collapse the separation between a traditional 'them' and a modern 'us.'

In visual ethnography--as in its written counterpart--there has been a shift from objectivity and 'facts' to subjectivity and 'points of view.' Following upon the impacts of interpretive, Marxist, and feminist theory in anthropology, we recognize that even the cultures of small-scale societies that were previously the stock-in-trade of the discipline can no longer be presented as unified and homogeneous realities. We understand that meanings are contested and negotiated in these (as in our own) societies--reflecting factors of age, gender, class, status, and power. In recognition of this complexity of society, films more often feature multiple voices and contested versions of reality. "Closed" didactic readings of societies by the anthropologist and filmmaker have yielded to "open" expressive readings that reflect more direct access to the "lived experiences" of subjects.

This latter effort to re-situate the individual as the primary focus of ethnographic filmmaking grades over into postmodern concerns with voice and authority. The omniscient voice-of-God noted above is now declass   and politically under attack. Filmmakers increasingly listen for indigenous voices "speaking with" or alongside their subjects with the intent of allowing subjects to voice their own concerns. Some advocate a kind of "participatory cinema" initiated by the most prolific of French ethnographic filmmakers, Jean Rouch. In this approach, filmmaker and subjects seek to work out an authentic collaboration that provides the latter a greater role in constructing their own images or that results in films that take us where their subjects want to go.

Around the globe, however, many of the traditional subjects of the filmmaker's gaze argue that anthropologists and other

professionals should have no authority at all to represent them. Indigenous groups assert that the only way their stories can truthfully be told is if the means of production are wholly in native control. It is in this climate that native filmmakers have emerged as "professional Others" who seek to "speak back" to the dominant culture in their own terms.

THE MARGARET MEAD FILM FESTIVAL

The Margaret Mead Film and Video Festival, held at New York City's American Museum of Natural History each fall, showcases new and innovative works by independent, ethnographic, and indigenous filmmakers. The 17th Festival, held October 4-10, 1993, included 62 films and videos selected from over 400 submissions that included student projects, television and independent productions. Although subject matters and film styles represent an eclectic offering, salient themes emerge. Aside from the concerns with reflexivity and multiple voices noted above, two themes, in particular, over the past few years highlight and help define recent trends in ethnographic film: indigenous perspectives and global perspectives.

This year's festival included a special focus on indigenous media, featuring several native filmmakers--from Papua New Guinea, Native American and Canadian Inuit communities, Japan, and Ghana.

The first two films described below reflect reflexive and participatory approaches; others that follow illustrate the diversity of approaches within the indigenous perspective. Two final films described reflect the growing concern with global and transnational outlooks. All are appropriate for the high school or college classroom.

THE EARTH IS OUR MOTHER/ THE JOURNEY BACK

This 1992 film depicts the encounter between Danish documentary filmmaker Peter Elsass and a community of Archuaco Indians in Columbia. Inhabitants of a coca growing region contested by the Colombian state, drug lords, and guerilla forces, the

Archuaco find their way of life and their communities caught in the struggle between these warring elements. The Archuaco and their elders were the subject of Elsass's first film, The Earth is our Mother, which depicts the role played by Archuaco elders in passing on and preserving the traditional culture of their people.

Elsass returns six years later to document the Archuaco response to the first film and to follow up on the impact that this film has had upon the community. The Journey Back insightfully and sometimes humorously explores the politics that emerge from this type of collaboration.

The filmmaker chose to advocate for the cultural autonomy of his subjects and builds this into the film at various turns. At one point, the Archuaco confront Columbian soldiers who occupy their most sacred ritual site. At another point, they accompany an elder to Bogata, the capital, to protest the murder of three Archuaco leaders believed slain by government security forces. The film thus provides a first hand look at the conflicts of race and culture in Columbia and the ways in which an indigenous people strive to perpetuate their way of life.

Elsass's two "participatory" films bring the "inaccessible" and "distant"--so typically a fixture of ethnographic film--close to our own political homefront. Teachers who draw upon these films for classroom use will want to think about the toll that the international drug trade takes on both the producers and consumers. In the global village, the little-known tribulations of the Archuaco are paradoxically juxtaposed with the unrest and violence of our own inner cities.

MEMORIES AND DREAMS

Another 1992 film that resonates with the reflexive and participatory approach is Memories and Dreams by Melissa Llewelyn-Davies (1992). This film is of interest if for no other reason than it marks the filmmaker's most recent return to the Maasai of the Loita Hills in Kenya where she shot the celebrated trilogy A Maasai

Diary, and The Woman's Olamal in the 1970s. All of these films have been enormously popular for teaching. In these finely crafted portraits of Maasi life, the filmmaker examined issues of gender, ownership, and power in Maasai society and gave us intimate emotional portraits of young Maasai women experiencing the major life transitions of their culture.

In Memories and Dreams the filmmaker returns nearly twenty years later to follow up on the lives of these women and to explore their own and their community's changing attitudes toward women's roles, sex, love, and marriage. As in her earlier works, Llewelyn-Davies is an ambiguous participant in this film, asserting her presence only as an off-screen voice that interrogates her subjects. Although there is "dialogue" between filmmaker and subjects in this film, genuine collaboration seems missing. At a time when authorship and ethnographic authority are being more carefully weighed, Llewelyn-Davies' role as interrogator seems a bit heavy-handed. The "dialogues" with Maasai women are fully controlled by Llewelyn-Davies and lack a mutuality of exchange. At one point when being queried about attitudes toward their husbands, for example, two women redirect similar questions at the filmmaker, asking her about her own husband (who had been involved in shooting the earlier films and was, in fact, known to them). Llewelyn-Davies, however, deflects the questions and moves the interrogation along to where she wishes it to go. As in more traditional 'observational' style films, the gulf between 'us' and 'them' is retained. This one-way feel to the dialogue left me, for one, with the nagging question as to whose "dreams and memories" were being revisited in this work--those of the Maasai or of the filmmaker.

INUIT PRODUCED VIDEOS

A series of videos are of note in the indigenous media category. They are three Inuit-produced videotapes on Inuit culture directed and produced by Zacharias Kunuk, an Inuit filmmaker from Igloodik,

(continued on p. 12)

ARCHAEOLOGISTS AT DISNEYLAND

The Society for American Archaeology (SAA) is holding its annual meeting at the Disneyland Hotel, Anaheim, California in April--and the program is chock full of offerings for those interested in archaeology and education! If you are interested in attending or receiving further information about the Society, call the SAA office at (202) 789-8200, or fax to (202) 789-0284. All interested in archaeology and education are invited to attend a 4:00 p.m. meeting on April 20 of the "Intersociety Public Education Working Group," which brings together individuals from a wide variety of institutions and societies interested in archaeology and education.

Friday and Saturday, April 20-21, the SAA offers a potpourri of activities for educators. Pam Wheat, Crow Canyon Archaeological Center, will offer a free 10-hour workshop; Brian Fagan and Kent Lightfoot will participate in the Public Education Session, "Investigating the Mysteries of Time with Archaeology." A hands-on archaeology fair, "Archaeology Land," will feature activity centers, hands-on displays, and manipulative exhibits focusing on preservation, cultural awareness, and stewardship.

How did the Society for American Archaeology become so involved and committed to public education? The effort began several years ago, encouraged by the top leadership of the society and carried out by a highly committed and enthusiastic group of individuals. In April 1990 a core group formed as the SAA Public Education Committee to work on projects that "promote awareness about and concern for the study of past cultures, and to engage people in the preservation and protection of heritage resources."

Soon thereafter, the *Archaeology and Public Education* newsletter appeared that today is distributed four times a year throughout the country "to aid educators, interpreters, archaeologists, and others who wish to teach the public about the value of archaeological research and resources." The newsletter is edited by Phyllis Messenger and KC Smith. The Public Education Committee developed a "Strategic Plan," identifying the priority goals toward which the committee would work over the next few years. These goals reflect the ongoing work of the SAA Public Education Committee and its subcommittees:

(see next page)



S.A.A. SUBCOMMITTEE ON SUBCOMMITTEES

1. Network Subcommittee

Expand and develop a network of provincial and state coordinators for public education. (46 coordinators currently develop joint meetings and poster sessions at regional archaeological meetings.)

2. Public Session Subcommittee

Offer public sessions at the SAA Annual Meeting. (In 1993, the public session drew 400 archaeologists, teachers, and the lay public. A school archaeology essay contest was held in St. Louis school districts, with the winners recognized at the SAA session.)

3. Workshops Subcommittee

Conduct archaeology education workshops for teachers at the SAA annual meeting. (Workshops have been held for the last three years, in cooperation with the National Park Service and the Bureau of Reclamation. The 1994 workshop is a two-day session.)

4. Resource Forum Subcommittee

Maintain a collection of existing archaeology education materials (called the "Resource Forum") and exhibit them at professional meetings. (The Education Resource Forum has been displayed at three SAA meetings and at other professional conferences. Future plans include publication of an annotated guide to exhibit resources and the development of multiple versions of the exhibit.)

5. Formal Education Subcommittee

Foster and develop pre-collegiate archaeology education through a variety of proactive strategies. (A set of guidelines for evaluating archaeology education materials for classroom use is being finalized under a Bureau of Reclamation grant. An evaluation of archaeology-related games for grades K-12 is underway with support from the Bureau of Land Management. An introductory packet for individuals requesting information about archaeology education is being finalized.)

6. Professional Involvement Subcommittee

Encourage professional community involvement in public archaeology and education. (Professional archaeologists and archaeology students are integral in

assuring the long-term success of public education. The committee will organize sessions at annual meetings on how to elevate the status of such activities in promotion and tenure reviews.)

7. Special Interest Groups Subcommittee

Work with special interest groups to promote education about archaeology and heritage preservation. (Many archaeologists collaborate on an individual, ad hoc basis with civic and recreational organizations having an interest in, or impact on, archaeological sites. Future efforts will focus on developing a relationship with one or more major organizations to provide information about archaeology and resource protection, articles for publication in newsletters, and other appropriate services or productions.)

8. Awards Subcommittee

Establish an awards program to recognize exemplary efforts that promote public archaeology education. (The SAA Executive Committee has authorized the development of an awards program to give special recognition to organizations and individuals who have promoted public education about the past, or who have engaged the public in the preservation and protection of heritage resources.)

9. Archaeology Week Subcommittee

Encourage and assist the development of state- or province-sponsored Archaeology or Heritage Preservation Weeks. (A growing number of U.S. states and Canadian provinces are establishing specific times for promoting archaeology and heritage preservation awareness, consisting of events, activities, and products that encourage public involvement.)

FOR FURTHER INFORMATION about the SAA Public Education Committee, or to receive the newsletter, contact Edward Friedman, chairman of the Public Education Committee, Bureau of Reclamation, P.O. Box 25007, D-5650, Denver, CO 80225.

[This article is based on "A Plan for the Future" by Phyllis Messenger, *Archaeology and Public Education* 4(1) August 1993.]

TEACHERS CORNER: SIMULATIONS

Culturally, economically, and socially diverse classrooms challenge teachers to foster more effective communication skills. Through using a combination of presentations, simulations, and debriefings, teams of students can use anthropology for collaborative problem-solving, thereby increasing their analytical and communication skills, as well as their personal relationship skills and competencies at handling cultural diversity.

PERSONAL CULTURE

One of the basic anthropological approaches that guides my teaching is **self-reflection**. Self-reflection is the active process of discovering, understanding, and defining one's own personal values, beliefs, thinking styles, and assumptions about reality, and is one effective means through which students can come to understand the anthropological concept of culture. I define personal culture as the organic complex or entirety of an individual's personal system of meaning: beliefs, values, perceptions,

assumptions, and explanatory frameworks about reality that underlie a person's behavior.

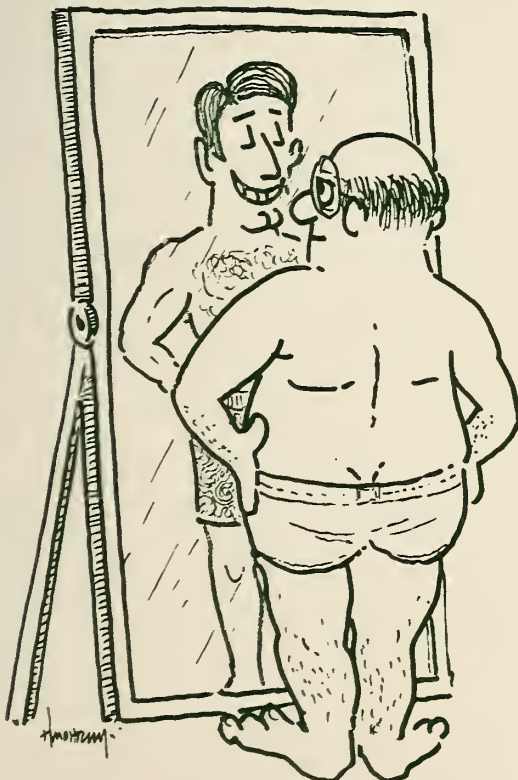
One's personal culture develops in the social interactions within one's family and within one's sociocultural milieu of community, work, school, affiliation groups and other local social organizations. One's personal culture can, of course, change over the course of one's lifetime, and is affected by the national culture and the various subcultures within which one lives.

Students need to understand how their personal culture and the cultures all around them influence their relationships with others. Interpersonal relationships demand effective communication, but this is difficult, particularly in multicultural contexts where people's personal cultures may be so different and so little understood by those engaged in the interaction.

Organizational or institutional culture is another level of culture I introduce to my students. Most of us live our daily lives within organizations. We need to understand more about the culture and social structure embodied in organizational policies, procedures, and programs, to become better problem-solvers and to communicate more effectively with others.

FOURTEEN COMPETENCIES

To enter into effective communication, and to build practical relationships with persons of diverse backgrounds and ways of behaving, it is helpful to strengthen certain personal competencies. Through engaging in simulations and debriefing exercises, students develop these competencies, and, in the process, increase their abilities for self-reflection and for understanding the personal, social, and organizational cultures in which they live. The 14 competencies described below include behaviors that enhance communication and relationships, and basic orientations to personal interactions with others, such as one's beliefs, values, and attitudes. Students can be encouraged to:



SELF REFLECTION

1. Personalize Observations: Recognize and accept that one's personal perceptions may not be shared by others; know and accept that 'my way is not the only way;' use 'I,' not 'you' messages.

2. Pay Attention to Your Feelings: Self-reflect on one's thoughts and feelings during an interaction.

3. Listen Carefully: Pay close attention to what is said, verbally and nonverbally.

4. Observe Attentively: Learn to understand meanings of nonverbal behavior.

5. Assume Complexity: Recognize multiple perspectives and outcomes.

6. Tolerate Ambiguity: Respond to unpredictable situations without stress.

7. Have Patience: Stay calm, stable, and persistent in difficult situations.

8. Manage Personal Biases: Treat people as individuals by recognizing that everyone belongs to many groups and that no one typifies a group.

9. Be Non-Judgemental: Not negatively judging others.

10. Be Flexible: Readjust quickly to changing situations.

11. Be Resourceful: Seek information about the cultures of those with whom you interact.

12. Have A Sense of Humor: Laugh at oneself and with others, not at others.

13. Show Respect: Behave in a respectful manner to those who are different.

14. Be Empathetic: Feel the thoughts, attitudes, and experiences of another.

Simulations that encourage these 14 competencies are active learning strategies that may include role playing and games. They provide students the opportunity to practice and apply their learning in the classroom environment. Simulations should include ample time for debriefing, a time when people who have shared a common experience discuss the meaning of that experience and its impact on the participants.

In all simulations, it is important to take students through a step-by-step approach: 1) introduce the simulation activity and its purpose, 2) define the roles that students will take, 3) train each person in his or her simulation role, 4) do the actual simulation with enough time for it to be fully

experienced, 5) debrief the experience, 6) self-evaluate the experience, and 7) evaluate the entire session with the other participants.

The following two simulations can be used together in the classroom to help students 1) develop self-reflection skills, 2) understand and analyze difficulties of communication within culturally diverse communities, and 3) grow in their own competency skills at managing cultural diversity.

SIMULATION # 1: Introduction to Self-Reflection

Ask students to write the following statement with their nondominant hand: "I am writing my name _____ with my nondominant hand."

After the exercise, ask the students the following: "Describe in three words or less your personal feelings and/or thoughts about the experience of writing with your nondominant hand."

As students answer, write their exact words on the board; usual responses include: "frustrated, vulnerable, awkward, embarrassed, fun." Following this discussion, introduce the next simulation.

SIMULATION #2: Cross-Cultural Communication

Divide the class into four equal groups. Give each group a different script from those offered below. The four groups have three minutes to become familiar with their scripts. Each script describes rules for communicating. Then each student is asked to pair up with a member of another group, but to follow his/her own group's script for communicating. Each person must obtain at least two pieces of information about his/her partner from the other group. Conversations are stopped after two minutes and students return to their original seats.

Scripts:

#1: Speak louder than you normally would, use hand gestures often, stand 6 inches

closer to your partner than you normally would, and ask lots of personal questions.

#2: Speak more softly than you normally would, stand much farther away from your partner than you normally would, do not initiate conversation, do not look at your partner in the eyes, and do not ask questions.

#3: Speak gently but in your normal voice, look down or over your partner's shoulder, do not show emotion or react to your partner when he or she is speaking, and avoid eye contact.

#4: Touch your partner when you change the topic of conversation and do that as often as you wish, look directly at your partner, ask questions often, and interrupt your partner fairly frequently.

Debriefing

1. Write four questions on the board before the simulation and explain that these will be used for later discussion. The questions are: What did you see or hear? What is its meaning in relation to ideas of culture we have discussed? What was your personal reaction to the experience? How are you going to use this experience in a practical way?

2. After the cross-cultural conversation simulation, ask students to give you their immediate personal response ("I felt rude," "I couldn't stop giggling," "I felt so frustrated").

3. Ask one person from each group to read his/her script.

4. Ask students to name various nonverbal forms of communication encountered in the simulation (gesture, eye contact, personal space).

5. Ask students to comment on what each learned from participating in the simulation.

Comments following this simulation often include: "I never realized before how much our communication is governed by rules,"

"We are just not conscious of what governs our behavior," "I can almost feel the culture operating inside me that I never saw before," "I never realized how much I could be 'turned off' by the way another person communicates," "It is hard to care about understanding another person's viewpoint when they are communicating in such a 'rude' manner."

At this point, ask students to offer ideas for how learning from this experience can be used in a practical way. Introduce the Fourteen Competencies and hand them out on a piece of paper to go over in detail. Offer the suggestion that practicing these competencies helps people deal more effectively with the frustrations that grow out of cross-cultural communication.

Suggested Readings

Cryer, P. "Designing an Educational Game, Simulation or Workshop: A 'Course and Curriculum' Design Perspective," *Simulation/Games for Learning* 17(2): 51-59, 1987.

Johnson, Margaret S., ed. "Simulation Sourcebook: 'Low Tech' Simulations for Anthropology Courses." Department of Anthropology, University of Colorado, Boulder, 1992.

Laveault, D. and P. Corbeil. "Assessing the Impact of Simulation Games on Learning: A Step-by-Step Approach." *Simulation/Games for Learning* 20(1):42-54, 1990.

Thatcher, D. C. "Promoting Learning Through Games and Simulations," *Simulation and Gaming* (September 1990): 262-273.

Twelker, P. A. and K. Kayden. "Simulation and Gaming for Learning." In Entwistle, N. (ed.), *Handbook of Educational Ideas and Practices*. New York: Routledge, 1990.

(continued on p. 15)

SUMMER FIELDWORK OPPORTUNITIES

Looking for adventure? For an opportunity to acquire new skills? Become a member of an archeological excavation or a scientific expedition in the United States or abroad and learn about another culture--past or present.

SMITHSONIAN PROGRAMS

Anthropology-related summer projects offered by Smithsonian Research Expeditions are:

Studying the Reenactment of the Battle of Little Big Horn. Record two reenactments of the Battle, the second being a Native American version (June 22-28).

Crow Culture: Writing a Contemporary Ethnography. Record everyday life on Crow Agency in Montana (August 17-23).

Crow and the Land: Folklore. Document stories and folklore handed down through generations in the hills of Custer County (June 29-July 6).

Bali Arts Festival. Observe, photograph, and interview performers of the annual Bali Arts Festival (June 9-18).

Polynesian Barkcloth: Preserving a Tradition. Assist in the conservation of Polynesian barkcloth in the Department of Anthropology's collections. Tours of conservation labs and lectures will give volunteers additional knowledge (April 17-30).

The Lamb Collection. Prepare this West African textile collection for storage at the new Museum Support Center in Maryland (July 31-August 13).

Ethnic Imagery in Advertising. Survey collections and conduct research on imagery of ethnic groups prior to photography and after 1870 when "mass culture" emerged, at the archives of the National Museum of American History (May 15-28).

For further information, write or call Smithsonian Research Expeditions, 490 L'Enfant Plaza, S.W., Suite 4210, Washington, D.C. 22024; (202) 287-3210.



TWO REENACTMENTS OF THE BATTLE OF LITTLE BIG HORN IN MONTANA THIS SUMMER...

Office of Elementary and Secondary Education (OESE)

OESE offers week-long courses in the sciences, arts, and humanities with in-service credit for teachers, K-12, from Maryland, the District of Columbia, and Virginia. Call Clare Cuddy at (202) 357-2404 for a registration form after May 1. This summer's offerings include a course held in conjunction with the Folklife Festival taught by SI folklorist and education specialist Betty Belanus, and a course focused on ways to incorporate an anthropological perspective into 7-12 social studies and language arts curriculum taught by AnthroNotes editor Ruth O. Selig.

ORGANIZATIONS TO CONTACT

Anthropology departments at local universities and colleges, state historic preservation offices, and state archeological societies often organize local archeological excavations and frequently accept volunteers with no previous fieldwork experience. The Archaeological Institute of America (AIA) offers a listing of state

archeologists as part of its yearly field school listing for the U.S. and abroad. The cost, including shipping and handling, is \$11.50 for members and \$13.50 for non-members. For each additional copy ordered, add 50 cents for shipping. Write: Kendall-Hunt Publishing Co., Order Dept., 2460 Kerper Blvd., Dubuque, IA 52001; (800) 338-5578. *Archaeology* magazine, published by the AIA, features an archeology travel guide to sites open to the public in the Old World (March/April issue) and the New World (May/June issue).

Several organizations offer volunteer public participation in worldwide research expeditions. Many of these organizations listed below are non-profit, and participation fees may be treated as tax-deductible contributions.

University Research Expeditions Program
University of California
2223 Fulton, 4th Floor
Berkeley, CA 94720
(510) 642-6586

Earthwatch
680 Mount Auburn St., Box 403,
Watertown, MA 02272.
(617) 926-8200
(Scholarships available for teachers)

CEDAM International
(CEDAM stands for Conservation,
Education, Diving, Archeology, Museums)
Fox Road
Croton-on-Hudson, NY 10520
(914) 271-5365

Foundation for Field Research
P.O. Box 2010
Alpine, CA 91903
or
Dept. P.; P.O. Box 771
St. George's Grenada (WI)
(809) 440-8854

SELECTED FIELD SCHOOLS

Summer Abroad through World Learning, Inc., the U.S. Experiment in International Living, offers students and adults opportunities to learn another culture through homestay, language-study, and

ecologically-focused programs. Write: World Learning, Inc., The U.S. Experiment in International Living, P.O. Box 676, Kipling Rd., Brattleboro, VT 50302-0676; (802) 258-3173.

Picuris Pueblo in the Sangre de Cristo Mountains, New Mexico, is the focus of an ethnographic field school in late July, sponsored by Middlesex County College. In addition to three weeks of instruction on the southwest cultures and in field methods, students will live with Pueblo families and participate in village life, including pottery making, adobe construction and feast day. Write: Dr. Diane Z. Wilhelm, Middlesex County College, 155 Mill Road, Box 3050, Edison, NJ 08818-3050; or call (908) 548-6000 ext. 3099.

Center for American Archeology, Kampsville Archeological Center conducts educational research programs for junior and senior high school students, college students, and the non-professional, and workshops for teachers. Scholarships are available for American Indian students. Write: Admissions Office, Kampsville Archeological Center, Kampsville, IL 62053; or call (618) 653-4316.

Drew University in West Africa offers a comprehensive study of West African art and architecture in Mali and Cote d'Ivoire (July 19-August 13). In Mali, students will be introduced to West African cultures through lectures and travel. In the Cote d'Ivoire, students will learn through apprenticeships about West African arts and crafts and archaeology. Write: Off-Campus Program Office, BC-115, Drew University, Madison, NJ 07940-4036; (201) 408-3438.

Northwestern University's Ethnographic Field School (June 20-August 13) is an opportunity to learn about the Navajo or Hispanic cultures of New Mexico and Arizona by designing independent research projects. Write or call: Professor Oswald Werner, Department of Anthropology, Northwestern University, Evanston, IL 60208; (708) 491-5402 or (708) 328-4012, evenings.

(continued on p. 15)

("Ethnographic Film," continued from p. 4)

Northwest Territories, Canada: Qaggig (Gathering Place, 1989), Nunaqpa (Going Inland, 1991), and Saputi (The Fish Trap, 1992). All of these videos have as their primary audience Inuit peoples themselves. All were made under the direction of Inuit elders and involve the 'reconstruction' and representation of various traditional Inuit practices. In contrast to the external contextualizing commentary of the anthropologist, we have only the subtitled dialogue of the Inuit. Recreating the recent past that exists only in memory, Kunuk seeks to keep alive a sense of identity grounded in a traditional way of life.

Teachers who have used films from the Netsilik Eskimo Series will find interesting parallels in Kunuk's videos, but, in this case, with a different sense of pacing and perspective in imaging the land, and in personal touches that give a sense of psychological realism and intimacy to the social interactions among the Inuit. Some teachers might wish to contrast Saputi with Fishing at the Stone Weir: Part I as a way to explore exactly what is distinctive about the Inuit perspective in Kanuk's videos that will become part of a series on Igloodik life for Canadian television.

IMAGINING INDIANS

By far the most notable film in this year's indigenous category was Victor Masayesva's Imagining Indians (1992). This Hopi filmmaker presents a Native perspective on the misrepresentation of Native Americans in feature films. Masayesva breaks with strict documentary conventions and feels free to use a combination of scripted scenes, documentary and feature archival footage, and interviews. Weaving a complex narrative, he plumbs the ways in which Native Americans react to, attempt to work with, or overtly resist their representation by the dominant White culture. We get an eye-opening Native look at recent popular films by Kevin Costner and Robert Redford. Intercut through all this is a subtheme about how a romanticized "noble savage" view of American Indians has gone hand-in-hand with the commodifi-



cation [commercialism] and appropriation of their arts and material culture.

Employing a keen sense of irony, Masayesva opens the film with a scene in a dentist's office, the walls of which are covered with broadsides for Hollywood films featuring Indians. The patient, a Native American woman, is seen seated in the dentist chair, her mouth plugged ("silenced") with cotton tubes. The ensuing inability of the dentist to communicate with his patient stands as a metaphor for the misunderstandings explored by the filmmaker--just as the visit to the dentist (read: "white man's medicine") constitutes a metaphor which speaks on various levels both to Whites and Native Americans. Virtually any viewer will associate the dentist's office with anxiety and discomfort, a sentiment that Masayesva plays out as he registers the sentiments which Native Americans express at being variously patronized and controlled by the dominant white culture. Periodically the dentist office scene re-appears throughout the film, to frame newly introduced subthemes that are introduced.

What is most refreshing about Imagining Indians, however, is not simply its "indigenous" perspective, but the fact that Masayesva (unlike some other native filmmakers and some anthropologists),

recognizes the existence of diversity and even ambiguity within this perspective. There is no single voice that "speaks back" to the dominant White culture but many competing voices with individual points of view. At one point the filmmaker explores native protest to a recent production by Robert Redford that casts a non-Indian in the starring role as a Native American. The inserts of two Native American "talking heads" appear on the screen, each simultaneously articulating a different viewpoint on the matter.

THE 'LOCAL' IN THE GLOBAL

Culture Within the global ethnospace is a second theme that has emerged in ethnographic filmmaking over the past few years. Two realities exist in these films. Cultures have become progressively "de-territorialized" as native peoples migrate to the colonial motherlands, as traditional art is commodified and produced for consumption within a world system, and as people find different ways of creating ethnicity in different sites of their respective diasporas. The second reality is that we can no longer maintain the fiction of presenting 'the local' without reference to the global.

In the 1960s, anthropologists began to handle these problems through network analysis, in the 70s through recourse to the concept of "world system," and in the 80s by reference to transnationalism. All along, however, most ethnographic filmmakers remained content to make films in rustic peasant villages or distant island or other remote "traditional" sites. The formula, in fact, remains popular for the types of made-for-television documentaries noted above. No doubt it produces the familiar feel for the exotic that audiences have come to appreciate in films dubbed 'ethnographic'.

But the world is now much more complex. Even television--with its current penchant for using images of 'the Other' in advertising--tells us as much. Today Aboriginal Australians control their own broadcasting network and display their art in the fashionable galleries of New York;

Buddhist temples exist in the heartland of America; a fair majority of Maori in New Zealand have embraced the creed of Rastafari, a religion and culture "invented" in the African Diaspora; and Songhay and other West African traders ply an international trade on the streets of Harlem. "Culture", the so-called object of anthropological study, stubbornly refuses to stay in its place and be properly analyzed regardless of how much we anthropologists long for the simplicity of our pastoral field sites.

While many popular documentaries continue to uphold the fiction of a radical separation between a modern 'us' and a traditional 'them,' the postmodern turn in filmmaking continues to dissolve this fiction. Films like *Cannibal Tours* (1987), *In and Out of Africa* (1990), *Market of Dreams* (1986), *My Town--Mio Paese* (1986), *Joe Leahy's Neighbors* (1987), *Black Harvest* (1992), and *Valencia Diary* (1992) all show the complex ways in which local and global domains intersect and are implicated in one another.

TWO EXAMPLES

In the 1993 Mead Festival, two films fit admirably into this more complex niche: *Rime and Reason* (1992) by Francis Guilbert and *Kofi: An African in France* (1993) by Carlyn Saltman and Beth Epstein. *Rime and Reason* is a lively reconnaissance exploring the global manifestations of rap, hiphop, and raggamuffin across the urban landscapes of France. What was initially a musical and cultural manifestation, featuring the cross-over between a Jamaican-inspired deejay style known as "toasting" and African-American rap and hip-hop, is now seen as having crossed the language barrier into multicultural France.

Guibert intercuts interviews with young working-class and immigrant males and females with performance vignettes, street scenes, and the visual artwork through which young immigrants (largely Arab and African and working class whites) publically announce their presence and claim their place in the urban terrain. Through interviews they discuss what the

style means to them as a form of identity and cultural resistance amidst the current anti-immigrant sentiments prevalent throughout much of France. In this film one gets a sense of the emergent and recombinant nature of hip-hop culture; something assisted by the highly visual symbols and codes of this postmodern form of cultural expression. Kofi, by contrast, is an intimate portrait film that picks up the remarkable story of Kofi Yamgnane, a missionary-educated native of Togo who recently became the first African ever to be elected as the mayor of a French town. The film traces how Kofi came to the Breton village where he lives with his French wife and all-white neighbors, his early problems of acceptance, and the headlines that followed in the wake of his election as mayor. Although he has left the village life of Africa far behind, Kofi manages to introduce some "tribal" traditions into his running of the Breton village with the formation of a council of elders. As the film unfolds, Kofi is summoned to Paris to assume a post as minister for "integration"--and in this role we begin to see how the French government attempts to use Kofi's own status as a symbol in dealing with the current social climate surrounding immigrants in France.

Screened together, Kofi and Rime and Reason form an interesting couplet. Together, they contain thought provoking perspectives from which to explore different realities of the immigration experience and radically different takes on how this experience relates to issues of race and identity.

CONCLUSION

Over the past two decades, ethnographic film has undergone a series of transformations, from films which are didactic and ones in which individuals appear as cultural 'types' rather than full-bodied individuals, to ones which are reflexive and that incorporate narrative strategies of presentation, providing access to indigenous voices and concerns. Many of these changes in visual ethnography took place before the more talked about postmodern turn in the writing of

ethnographic texts. The concern with "dispersed authority"--producing texts which present more provisional readings of cultural phenomenon in which the burden of representation is somehow 'shared' between ethnographer and subjects--was recognized as an issue in ethnographic filmmaking over a decade before it became a concern in 'writing culture.' Perhaps one of the reasons for this is that film images are specific and cannot in themselves generalize from the immediacy of the occurrences they record. Film presents behavior and events 'fully-formed' and cannot as easily overlook the specific individuals which they present to our gaze.

Concerns over voice and authority have led to a repositioning of the subject across broad swaths of ethnographic film. Films are more open to native voices and concerns. In addition, more films seek to produce representations commensurate with the lived experience of the specific and named individuals they depict. This tradition, of course, has a long history dating to Robert Flaherty's *Nanook of the North*. Now, however, in addition to *Nanook*, we are more likely to recognize other 'stars' of ethnographic cinema--Damoré Zika, !Nai, Onka, Jero Tapakan, and others. Largely because of these developments, more anthropologists now consider ethnographic film to be an alternative means of representation with its own strengths and weaknesses, rather than merely an adjunct to the ethnographic text.

In acknowledging that film is a form of communication (as argued for decades by scholars like Sol Worth and Jay Ruby), there is an accompanying expectation that more critical skills for 'reading' film need to be brought to bear by those who use them. This is especially true given the challenge of 'indigenous perspectives' and indigenously produced media. Ethnographic films are not merely depictions of 'the real'; they articulate points of view and incorporate ideologies of their own. I concur with the assessment recently put forward by Jay Ruby that "The move to give greater voice and authority to the subject [in film] has now reached a local but extreme point" (Ruby 1991:54). What

indigenous voices say about themselves and their situation is as much data to be interpreted as insight into the world of the Other.

Note.

A free listing of films (with distributor information) shown at the 1993 Margaret Mead Film Festival is available from the Education Department, American Museum of Natural History, Central Park West at 79th Street, New York, N.Y. 10024. For further information about the film festival call 212/769-5305; fax 212/769-5329. In addition, the Margaret Mead Traveling Film and Video Festival is scheduled to appear in Berkeley, Washington, D.C., Los Angeles, Philadelphia, and Austin.

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National Museum of Natural History

("Simulations," continued from p. 9)

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("Summer Opportunities," continued from p.11)

Southwestern Archaeology on the Ground and in the Classroom is a graduate level archeology field class for primary and secondary school teachers, offered by Arizona State University. Teachers, who can choose one of two sessions--July 11-26 or July 27-August 11--will excavate Rattlesnake Point Ruin, a 90-room, 14th century pueblo in Lyman Lake State Park near St. Johns. For the course, teachers will develop a unit on Southwestern archeology appropriate to the grade level taught. Write: Lyman Lake Prehistory Project, Department of Anthropology, Arizona State University, Tempe, AZ 85287-2402; or call (602) 965-6213.

Human Origins and Prehistory in Kenya: The Koobi Fora Field School (June 5-July 16; July 23-September 2), offered by Harvard University Summer School and the National Museums of Kenya, introduces the wealth of paleoanthropological evidence at Koobi Fora and field methods in early human research. Write or call: Dr. Harry V. Merrick, Koobi Fora Field School, Harvard Summer School, 51 Brattle St., Cambridge, MA 02138; (203) 481-0674 or (617) 495-2921.

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NEW PERSPECTIVES ON AGRICULTURAL ORIGINS IN THE ANCIENT NEAR EAST

Introduction

How can a heap of long buried, extremely fragmented animal bones help us better understand the origins of agriculture, perhaps the most significant turning point in the course of human history?

Agriculture, which anthropologists define as both the domestication of plants and animals, changed forever the evolution of human societies. While agriculture brought about unparalleled productivity and ever improving standards of living, it also led to swelling populations, widespread hunger, and irreversible environmental change. It should be no surprise, then, that the causes and consequences of the origins of agriculture, often called the Neolithic Revolution, are recurring topics of lively debate within the field of archeology.

What were the preconditions that led to the domestication of plants and animals? Why did people nearly 10,000 years ago first begin to experiment with crops and the rearing of livestock? When and why did these practices replace gathering wild resources and hunting game as the primary means for feeding people?

Early 20th Century Views

Theories explaining the causes and consequences of agriculture have been not only varied but frequently contradictory. In

the late 19th through the mid-20th century, many researchers viewed agriculture as a technological breakthrough, forever freeing humankind from a life on the margins, from a mean, brutish existence that relied on wits and luck for survival. Agriculture, in this view, brought with it an era of bounty, with people reaping a rich harvest of predictable and nutritious plants and animals. This ability expanded with each new technological refinement--the plow, draft animals, irrigation. Farmers' labors were seasonal, affording leisure time to invent labor saving technologies as well as cultural elaborations in the arts and sciences. Early agriculture was the first major watershed, setting the stage for the subsequent grand threshold of human achievement--the development of civilization.

Mid-20th Century Views

During the 1960s and 1970s, the world became increasingly concerned with scarcities of primary resources and overpopulation, with people demanding limits to growth. In this climate a very different picture emerged of the origins of agriculture. The life of the hunter-gatherer, past and present, no longer was described as one of hardship, privation, and ceaseless toil. Rather, anthropologists saw hunter-gatherers as "the original affluent society"--people with modest needs met by occasional hunting forays and sporadic collecting. Agriculture was viewed as a



EXPULSION FROM EDEN ?

kind of expulsion from Eden, brought about by the inevitable expansion of population beyond the capacity of hunter-gatherer strategies to satisfy basic needs. The price of the pre-Neolithic baby boom, the punishment for taking the first bite of the domesticated apple, was the farmer's life of hardship and toil.

In this view, growing crops and raising animals provided more food, but the food was less nutritious and less palatable than people had previously enjoyed. Agriculture accelerated the rate of population increase, resulting in more widespread hunger than the world had ever seen. The reduction in biological diversity accompanying the spread of agriculture undermined the stability of natural resources, paving the way for periodic, devastating ecological crises.

These two alternative visions of the origins of agriculture, as blessing or blight, serve as opposite poles of the debate. Researchers are discovering, however, that the story of the development of plant and animal domestication and the resultant food producing economies is far richer and more complex than either of these two views.

Earlier interpretations, for example, posited that all peoples throughout the Near East adopted food producing technologies quickly and completely, never looking back

to earlier days of hunting and gathering. The wide array of suitable plant and animal domesticates, the favorable local environmental conditions, and the human population dynamics may well explain a generally rapid embrace of food production as a more reliable subsistence strategy than hunting and gathering. But within the Near East, the domesticates and the timing of their adoption varied, with each region emphasizing different combinations of cereals and animals in varying rates and sequences. The Khabur Basin provides one case study illustrating the variation in human adaptation to the development of farming and herding.

The Khabur Basin of Ancient Mesopotamia

The Khabur Basin is nestled in the far northeastern corner of modern-day Syria, bordered by Turkey to the north and Iraq to the south and east. The northern Khabur Basin is dissected by the Khabur River and a number of streams (or wadis, as they are called in the Near East) fanning out across the basin. These wadis are often dry in the searing summer months. During the late fall through the spring, they carry seasonal rains and runoff from northern upland areas. These seasonal streams converge where the Khabur River begins its journey southward, eventually joining the Euphrates River. There is a steep north-south gradient of rainfall in the

Khabur Basin. In the far north, there is more than enough precipitation to support rain-fed, non-irrigation based agriculture, but rainfall levels decrease precipitously as you move southward, where rain-fed farming becomes an increasingly risky business.

Early Settlement in the Khabur Basin

Settlement in the Khabur Basin was sparse up until about 6,000 B.C. There are no sites known in the region before 14,000 B.C. and only two sites date between 14,000 and 10,000 B.C. The eighth millennium B.C. (8,000 to 7,000 B.C.) saw the introduction of farming and herding into the Basin. For almost 2,000 years a few small communities, located exclusively in the better-watered northern region, relied primarily on domestic resources: cereal grains, lentils, and pulses (pod bearing plants such as peas and beans), as well as sheep and goats, and later pigs and cattle. Then the northern steppe witnessed a substantial increase in settlement. A number of farming communities arose in the upper Khabur Basin, all of which produced a distinctive pottery, linking them to a Halafian cultural tradition that spread widely across Northern Mesopotamia.

The Halafian Period, named after Tell Halaf in the northern Khabur, is believed to have experienced a remarkable proliferation of rain-fed farm communities, an expansion of far flung trading networks, and, possibly, the development of more complex social organization. From what we know of the plant and animal remains recovered from Halafian sites in well-watered areas, these communities relied heavily on domestic crops and live-

stock, although a small amount of wild plants and animals were also gathered and hunted.

Umm Qseir

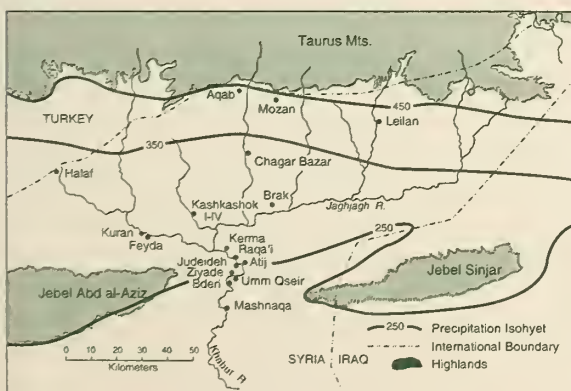
The first indication of population movement out of the northern steppe into the arid southern steppe comes from Halafian levels at the small site of Umm Qseir, situated just below the 10" (250 mm) rainfall boundary. Umm Qseir is located about 19 miles (30 km) away from the nearest contemporary site and is very small: no more than a quarter of an acre (1/10 hectare) in size. Excavators from Yale University found only ephemeral traces of architecture at Umm Qseir and essentially no tools used in grain harvesting and processing. The entire Halafian occupation of Umm Qseir seems to have lasted no more than 200 years, between 6,000 and 5,000 B.C., and the site was probably never occupied by more than two or three families. We originally thought this tiny Halafian outpost was a seasonal encampment, used by small groups who traveled with their flocks from established villages in the north to take advantage of the abundant southern spring grasses.

Animal Bone Analysis

Through extensive analysis of the plant and animal remains from Umm Qseir, we tested our first hypothesis that the site was a seasonal encampment of mobile herders or pastoralists. Our analysis demonstrated this hypothesis to be absolutely dead wrong!

Through the painstaking, sometimes frightfully dull study of thousands of broken bones and fragments of charred seeds, we uncovered clues to reconstruct the daily subsistence of people living in this tiny community in Mesopotamia between 6,000 and 5,000 B.C.; the clues told us much about the complexity of these people's yearly strategies to survive.

An average season of archaeological excavation in the Near East can yield upwards of 50,000 bones, each of which is of interest to the zooarchaeologist who specializes in studying animal bones. The



bone analysis requires an incredible amount of patience and a sharp eye for seeing patterns after thousands of observations have been recorded. Bones first have to be washed and dried, sorted, labeled, and coded for a variety of information: animal species, skeletal element, side, type of breakage, and so on. The zooarchaeologist makes these observations, often using skeletons of modern animals to help identify broken bone fragments.

The bones and teeth of an animal carry hidden clues to the age and season during which that animal was killed. Long bones (such as the femur or radius) fuse at certain known ages. If you find an unfused distal end of a sheep humerus, you know that that sheep was killed before it reached its first birthday. Like human children, mammals lose their baby teeth, and their adult teeth erupt at known ages. The rate at which teeth wear with use over time also is known for some animals as is the peak birth months.

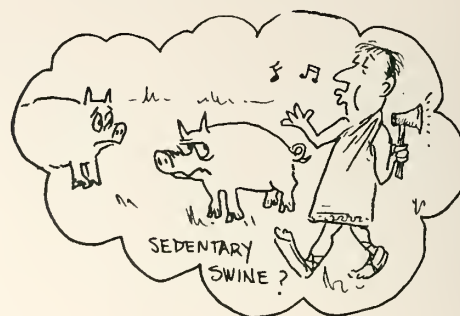
The zooarchaeologist uses this knowledge when analyzing bones to calculate the age, and, in some cases, the season in which an animal was killed. With a large enough sample of bones, an age profile of the flock and the primary seasons in which the animals were slaughtered can be identified. From this profile, a range of conclusions can be drawn about the relationship of humans to the animals with which they lived--both domestic and wild.

The Puzzle of Umm Qseir

Pigs Offer the First Clues

Was Umm Qseir a seasonal settlement for pastoral herders coming down from the North, or was it a year-round settlement? Domestic species utilized by residents of Umm Qseir in the 6th millennium (6,000-5,000 B.C.) consisted of sheep, goat, and pig, but no domestic cattle. The absence of the full range of Neolithic domesticates (sheep/goat, pig, and domestic cattle) at first supported the hypothesis that Umm Qseir was a site for pastoralists taking seasonal advantage of the lush late winter/early spring pasturage in the region.

However, pigs did not fit easily into this scenario. Pigs have neither the legs nor the temperament for long distance migration, and, though there are some instances of pig drives in the past, swine are not customarily associated with pastoralists in the Near East. In fact, pigs are usually taken as markers of a sedentary life style.



It was possible, however, that Halafian Umm Qseirians drove a pig or two down to the area each spring along with their domestic sheep and goats. Information on both the age and, especially, the season of death of the pigs consumed at Umm Qseir was necessary to resolve this question. Based on an examination of pig teeth from Umm Qseir, we knew the slaughter of swine at the site focused on animals between 6 to 18 months of age. This is a common culling (slaughter) pattern for domestic swine. Yet, although there is an emphasis on young pigs, the kill-off of swine at Umm Qseir was not confined to piglets. There were also older animals, in the 3 to 4+ year age range, indicative of the presence of quite elderly swine at Umm Qseir. Not just one or two pigs were brought to the site each season, but, rather, a viable breeding herd must have been present.

Strong seasonality in kill-off of pigs at Halafian Umm Qseir also took place. Slaughter of swine seems to have been most common from May to October, particularly from August through October. This period includes the arid summer months and the early rainy season--the leanest resource period in the region. Intensity of swine slaughter slackens in the months between November and April, the period of greatest bounty of plant and animal resources in the middle Khabur.

Sheep and Goats Offer Additional Clues

We tentatively concluded that pigs were present at Umm Qseir throughout the year and that at least some Umm Qseir residents lived here on a permanent basis. But did all the residents live here all year long? Perhaps just a few people resided here year round, eating pigs in the hard times, to be joined by pastoralists in the late winter/early spring, pasturing their sheep and goats. We needed to look carefully at the sheep and goat age and seasonality data to help give us the answer.

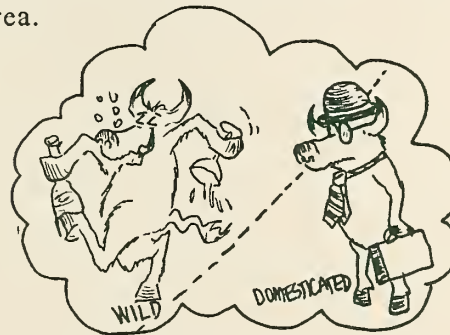
Sheep and goat age distributions indicate an emphasis on culling animals in the 1 to 2.5 year range. Once again the bones told us that both young lambs and kids and older sheep and goats were eaten at the site. Seasonality data indicate relatively low kill-off in the first six months after birth (from February to July), and a peak in slaughter of lambs and kids in the second six months (between August and January). In the following six month periods, mortality consistently slackens in the late winter/early spring months, and increases in the summer and fall. Once again, it is these months of hot, dry summer and sodden unproductive early rainy season that are the hardest on herds in the region today. This is the most likely season for kill-off of domestic sheep and goats from resident herds. It is, however, the least likely season for pastoralists to be here, since these are the hardest months in this region.

If these animal bones had been the result of nomadic pastoralist culling, they would have reflected a kill-off in the late winter/early spring, when flocks would have been brought to the southern region to feed on the luxuriant spring grasses of the steppe. In addition, there would be a virtual absence of animals in the more stressful dry summer/early winter months, when pastoralists with their herds would have headed north.

Wild Animal Clues

The biggest surprise from this collection of bones did not come from domestic animals, however, but from wild ones. Unlike

contemporary and earlier sites on the northern steppe--where domesticated animals are overwhelmingly the most commonly eaten in early farming villages--at Halafian Umm Qseir, bones of domestic animals comprise less than half of the bone sample. Wild species dominate! People were eating gazelle, wild ass, wild cattle, deer, hare, turtles, fish, birds, and fresh water clams--all the local wild resources in the area.



Seasonality data for the Umm Qseir gazelle adds to our understanding of the subsistence economy. The advanced state of wear on many of the gazelle lower deciduous third molars, a tooth that is shed at about 14 months of age, indicate that these animals were hunted and killed around the time of their first birthday. Since gazelle in the region give birth in March and April, this means there was special emphasis on spring gazelle hunting. Wild game attracted to the region to feed on the tasty spring grasses would have been easy prey during this time of year.

Final Clues From Plant Remains

Plant remains from Umm Qseir reinforce the picture painted by the faunal (animal) data; the site must have been occupied year round. Contrary to our initial hypothesis, Halafian occupants of Umm Qseir were not pastoralists, but rather pioneering farmsteaders. People came to this previously uninhabited region, bringing with them their domestic sheep, goats, and pigs, as well as domestic crops--in effect carrying with them the basic elements of the Neolithic Revolution. In this relatively untouched environment with its plentiful wild resources, these early settlers did not march lock-step to the drum of the Neolithic Revolution. They did not settle down to a traditional village life based on

dependence on domestic resources. Nor did they use the area only as a seasonal feed lot for their domestic flocks.

Instead, Halafian Umm Qseirians took full advantage of the natural (wild) riches of this new environment in its seasons of plenty, while relying on their domestic resources to tide them through the lean times. Spring was the most bountiful season at Umm Qseir--a time when crops of emmer, barley, and pulses were harvested, and when wild game feeding on the abundant spring growth of the steppe was easy prey. During the hotter summer months and into the unproductive winter season, when game was likely more dispersed across the steppe, Umm Qseirians could rely on stored grain, fall fruiting wild shrubs and trees, and their domestic stock of sheep, goat, and pig.

North and South Khabur Basin Compared

Subsequent and ongoing analysis of animal and plant remains from 17 sites in the Khabur Basin demonstrates that Umm Qseir is not unique, but part of an increasingly interesting and unexpected picture of post-Neolithic subsistence in the region. These sites date from the first introduction of domesticated plants and animals into the region (8,000 - 7,000 B.C.) through the rise of the first state-level societies (3,000 - 2,000 B.C.). Village communities in the better watered, more densely populated north (today a highly productive dry farming zone) followed the expected post-Neolithic subsistence pattern, with increasingly exclusive reliance on domestic crops and herd animals. Even so, there is evidence that wild animals remained relatively plentiful in the area up through about 3,000 B.C.

In contrast, for more than 2,000 years, small isolated communities on the drier southern steppe developed highly localized subsistence practices. Residents of the southern steppe mixed and matched selected domesticates with a heavy dependence on a variety of wild resources. People of the more arid, marginal, sparsely populated area apparently compensated for the unpredictability of a high risk environment by expanding their resource base to include

both domestic and wild resources. Significantly, the greatest dietary eclecticism seems to be found not in the fertile heartland but in the more arid frontier. In the more difficult environment, people met the challenge by combining their earlier reliance on wild game with newer domesticated resources.

Conclusions

There are no more herds of wild animals on today's treeless steppe. The rich diversity of wild plants that once supported these herds has been replaced by mono-crop irrigated fields and by highly degraded pasture in outlying areas. The long term environmental impact of intensive agro-pastoral economies on wild resources in this region is inarguable.

Our information, however, indicates that the onset of environmental degradation did not immediately follow the introduction of farming and herding. Early inhabitants of this region mixed agriculture and hunting/collecting without significant ill effects on indigenous wild species of plants or animals. Significant ecological change accompanied the urban based, agricultural economy several thousand years after the establishment of the first farming communities in the region. The small sample of plant remains studied from 3rd millennium B.C. sites on the southern steppe indicates that by this time hardwoods had been replaced by fast growing shrubby plants, and animal dung had become the primary fuel source--the first fuel crisis in prehistory!

What does this case study of subsistence in the Khabur Basin tell us about the consequences of agriculture in the Near East? The impact of the Neolithic Revolution was not nearly as uniform, nor as irreversible as is sometimes portrayed. The realities after the "Revolution" do not conform to theories that see the origins of agriculture as either a technological blessing or an environmental blight locking people into an economy based solely on domestic resources. Once people became farmers and herders, many still continued to practice hunting and gathering, mixing

old and new strategies. A technology once discovered need not shackle people into its exclusive practice; a social organization or an economy once established need not be an immutable obstacle to cultural flexibility or human ingenuity.

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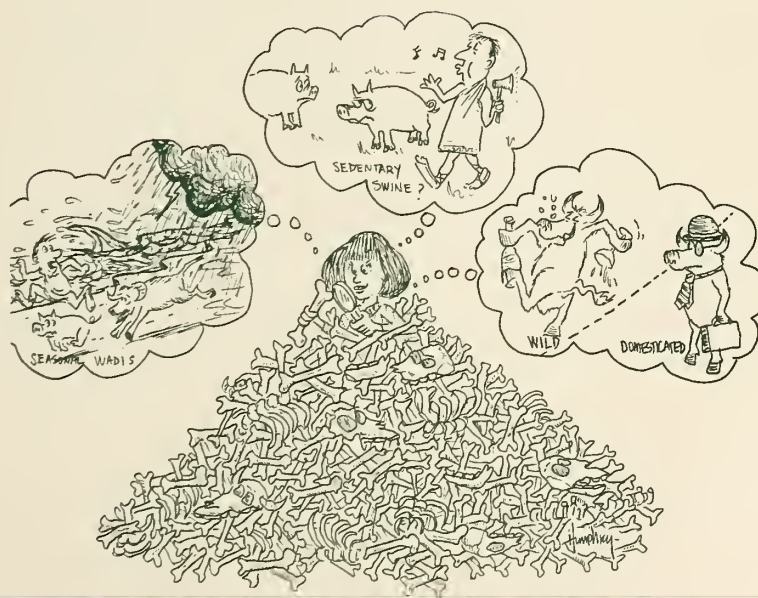
MELINDA ZEDER TALKS TO ANTHRONOTES EDITORS

At nine I decided to become a Near Eastern archeologist, inspired by my mother who was writing an historical novel about the Egyptian Pharaoh Akhenaton. Alone, she

sailed up the Nile River and came home with fascinating stories of ruins and digs.

As a high school junior, I went on my first dig in Taos, New Mexico; by the end of the field season I was hooked, and took anthropology as a high school senior. As a sophomore at the University of Michigan, I worked in the museum washing animal bones, which I realized were an under-utilized archeological resource. I also worked with scientists developing one of the first computerized coding systems for the analysis of bones, allowing us to process huge amounts of observations to profile age and seasonality patterns, among other things. It took eleven years of sorting, identifying, and analyzing over 100,000 bones from a single site (Tal-e Malyan) before I had enough data and conclusions on feeding early cities to write a dissertation that led to my first book.

For me, the fun and fascination of archeology is making big ideas talk to little bits of data, and have the data answer back in meaningful ways. From the beginning of my career, I wanted to explain how early communities began to depend on domesticates, since these communities eventually became the foundations of large urban centers leading to the beginnings of large scale civilizations.



THE TREETOP PEOPLE OF NEW GUINEA: A SUMMER FILM SPECIAL

Living in an unmapped, isolated region of Irian Jaya, the western half of the big island of New Guinea, the Korowai met their first anthropologist in June 1993--Paul Michael Taylor of the National Museum of Natural History, Smithsonian Institution. Curator of Asian Ethnology and Director of the Asian Cultural History Program, Taylor has devoted over sixteen years to the study of the languages, ethnobiology, and cultures of Indonesia.

Along with his research collaborator John Burke Burnett and student intern Norman H. Wibowo, Taylor travelled with a four-person film crew to this easternmost province of Indonesia, to begin research on the ecological history of the area, studying how the Korowai relate to their rainforest environment. The Korowai live in tree-houses soaring thirty to ninety feet above the ground, building new ones every few years throughout their "gardens." A Korowai "garden" includes not only the small cultivated area below the tree house, but also all the rainforest in the clan territory. Those with rights to these gardens are known as the "lords of the garden."

The film follows Taylor and his entourage as they travel upriver by dugout canoes and then by foot through the rainforest where they negotiate mud and creek crossings and long "tightrope" walks across fallen logs. Pushing to the edge of the so-called "pacification line" (the line beyond which inter-clan warfare is still active and outsiders cannot venture), they trekked through flooded landscape, where the water on the "paths" between treehouse clusters often reached mid-thigh and contained clinging leeches.

Taylor chose this location with the help of former Dutch missionary Gerrit van Enk, who lived among the Korowai from 1983 to 1993. Neighbors of the better-known Asmat, among whom the late Michael Rockefeller collected beautifully carved



dugout canoes and elaborately sculpted house posts, war shields, spears, and body ornaments, the Korowai share some of these material culture objects such as shields and bows and arrows. Unlike the Asmat, however, the Korowai have never been the subject of anthropological study until now.

In addition to the film crew, three Indonesians were hired as kitchen crew and field site supervisors. These three, as well as Paul and his intern Norman Wibowo, knew the Indonesian language that serves as a lingua franca throughout the region of Irian Jaya, where there are over 250 local languages. A few Korowai had learned some Indonesian from the Dutch missionary van Enk, making it possible for them to tell Paul in Indonesian what their fellow Korowai were saying. Paul could then simultaneously translate from Indonesian into English for the film crew, and, at the same time, begin to learn the local Korowai language himself. As the film producer Judy Hallet explained, "Paul's language ability in the field was extraordinary to watch....Because he was so gentle and relaxed and the Korowai so trusting of him, he provided a perfect bridge between us and people whose language was completely unknown to us" (Hallet, personal communication).

According to filmed eyewitness accounts by Korowai adults, the Korowai and a few neighboring groups practiced cannibalism in the recent past. Taylor believes these filmed eyewitness accounts present evidence that will stand up to expert evaluation. Therefore, Western New Guinea

where the role of cannibalism still can be studied.

"Treehouse People/Cannibal Justice" is a collaboration between a scientist, Paul Taylor, and a film producer, Judith Dwan Hallet, working jointly with Hearst Entertainment/Arts & Entertainment Network (U.S.), Tele Images (France) and the Smithsonian Institution. Each kept a field journal.

While Taylor and Hallet shared many of the same goals for the film, they reveal different approaches, perceptions, and experiences in their "journals." Even their method of writing was different: Hallet made notes in the field, then created a "journal" after her return, based on her records, later recollections, and Taylor's translations of interviews he made in the field. Taylor wrote his journal daily, partly in English and partly in local languages. When he transcribed the journal later, he clearly distinguished annotations and translations made after his return from those made on-the-spot. In addition to expressing different perceptions, these two "journals" record amusing anecdotes, highlighting not only two cultures in contact, but two different people working in two very different professional roles.

HALLET writes (June 9, 1993): "In the film, we need to introduce New Guinea as a land of mystery, myths, headhunting.... We can show jungle, faces, stock footage of early expeditions.... We can talk about Michael Rockefeller and the Asmat." That same day, **TAYLOR** records, "Their original concept of filming the anthropologist going to 'contact' a previously uncontacted group of people is outdated: 1) 'contact' is not a genre of valid anthropological research, and 2) even if it were, everybody here is already 'in contact'."

On June 12, **HALLET** writes, "Paul is starting to learn Korowai. He says one of the best ways to start learning a language is by learning how to count." Three days later **HALLET** writes, "Paul is spending a great deal of time learning the genealogy. He says this is a good way to begin to learn

about a culture.... Paul says the kinship terminology is based on the Omaha skewing system.... For us it is practically incomprehensible and definitely too esoteric for our film." **TAYLOR** writes (June 15): "I translate introductions into English for the [film] crew. It's their first introduction to the Omaha kinship system, since several of Yakob's grandfathers are his age or younger. I used the example...that the Italian word for grandchild and nephew are the same (nipote); a 'skewing' of generations that reflects the old Omaha kinship system of ancient Latin. Thus the expression 'Omaha skewing rule.'"

On June 15, **TAYLOR** made the following entry: "The film crew finds the place 'beautiful,' 'gentle,' 'incredible,' etc.--and the filming schedule still dominates. But my own ideas and opinions are becoming surprisingly influential, since I'm the only one who can speak to the people here and interpret what they're saying.... they're sure they're supposed to film me doing science, but less sure exactly what that entails. Unfortunately, much of it [science] isn't 'filmic'." Later, in his journal (June 21), **TAYLOR** wrote of the interest the Korowai had in his field guide on birds. "Everyone regularly gathers around my copy of Beehler et al.'s *Birds of New Guinea*, discussing the many color plates. 'They think it's a menu,' someone on the kitchen crew said."

HALLET records some of the dialogue among the Korowai themselves in her journal. Such conversations were often recorded by the sound recordist (sometimes accidentally), and translated later. They illustrate a continuing Korowai bafflement at the unexpected presence of their guests, and a strong concern for their safety. For example, two Korowai men were recorded talking after they'd been asked to build a palm-frond shower-enclosure for the portable, hand-filled, solar-heated shower:

1st man: "What are they doing? Are they making a bird blind?"

2nd man: "No, they are making a shower."

1st man: "But there is no water there. What a funny place for a shower."

Another conversation was accidentally recorded during a film sequence when a tree was being chopped down:

1st man: 'Be careful of the foreigners. They are climbing the platform, and we are cutting down the trees, and they could be in danger.'

2nd man: 'If they fall off the platform and get hurt, who is capable of carrying them? They are so big.'

1st man: 'Oh that would be impossible! No one is strong enough to carry them.'

Near the end of their stay, **TAYLOR** laments the lack of time for intensive interviews (June 27): "Judy, Reuben, et al. [the film crew] are understandably frustrated by the lack of visual excitement in these interviews. The informant who allowed a major breakthrough in the interpretation of cannibalism is the village chief of Manggel--not a photogenic character to begin with, and less so since he insists on wearing his one t-shirt (that says 'Cartier' on it). He's very much an outsider here, in many ways, as a government-appointed village chief...but he's...a central character in the modernization of the region."

The film traces Taylor and Hallet's journey deep into the rainforest, to ever more remote tree house clusters, where they begin to hear about the role of cannibalism in the Korowai recent past. In his journal entry (June 25), **TAYLOR** states: "I'm now beginning to think of cannibalism as part of the Korowai criminal justice system, and to think there are two kinds: 1) the sentence of death followed by cannibalism given to criminals on an individual basis--in which a clan expels one of its own members to be killed and eaten by a neighboring clan with which it maintains reciprocal arrangements for carrying out such sentences; and 2) the murder and cannibalization that is the consequence of interclan warfare, in which an enemy may be killed and eaten." The "second kind is widely reported but the first kind...is an exciting new discovery."



HALLET on June 25 writes in her journal: "The chief of Manggel, Funayare, describes in great detail how you kill and eat someone....With such detailed description of cannibalism, we decide to film a series of illustrative but abstract scenes by the river. The men can build a fire and wrap sago leaves around the stones and cook the sago over the burning coals. These scenes can play over Funayare's explanation of cannibalism...Although we never saw it, there is definitely cannibalism practiced here....Paul says it is as bad to define the Korowai as a culture that simply practices cannibalism as it would be to define the American culture based on capital punishment and death row."

Taylor pointed out that many of the plants and animals in this lush environment are unknown or of rare species, found nowhere else in the world. He collected, often with the help of the Korowai, samples of rare insects, snakes, mammals, and plants for an Indonesian university that is collaborating in his research.

The film, "Treehouse People/Cannibal Justice," will be shown on A&E Entertainment Network, Sunday, July 10, 1994 at 8 p.m. Teachers and students studying Southeast Asian cultures, rainforest ecology, and geography, world history, and anthropology will enjoy this informative and visually beautiful film.

Ann Kaupp

TEACHER'S CORNER: BEYOND THE CLASSROOM WALLS

[Editor's Note: Working in the Appalachian region of Southwestern Virginia, Radford University anthropologists Melinda Bollar Wagner and Mary B. La Lone have inspired their classes to work together on collaborative, semester-long, ethnographic field projects related to the local community and culture. Wagner, who teaches Appalachian Cultures and the Anthropology of Religion, discusses what influenced her to change her teaching and describes an Appalachia book project. La Lone redesigned her course in Economic Anthropology to make the subject "come alive" for her students through studying flea markets. The two class projects described below can be adapted for students anywhere.]

UNIVERSITY STUDENTS CREATE A CHILDREN'S BOOK

Over several years and under the influence of the University's "Writing Across the Curriculum" program, I cautiously became more "experimental" in my use of writing assignments for my anthropology classes and less "hardline" about requiring a 10-15 page research paper. It was evident to me that many of the research papers did not reflect the kind of student involvement and caring that produces strong writing. The student-written *ABC's of Appalachia* book project accomplished three objectives: teaching its student authors about Appalachian cultures and how they are perceived; enabling my class to work together on a collaborative project; and offering students real motivation and training for producing strong prose.

Over ten years ago, one of my classes and I decided to write a children's book about Appalachia because we realized there was little information about Appalachia for young children. The Appalachian students in class said there had been little recognition of their cultural heritage in school when they were growing up. One told us: "Virginia history was Tidewater history; we never learned anything about the area we lived in."

The students agreed they would like to "capture" children at a pretty young age and get them interested in Appalachia. For non-Appalachian students this would aid in their understanding and communication; for Appalachian students, it would help instill pride in their heritage and identity.

We decided the book would have an "ABC's" format, with one page of text and one illustration for each letter. We divided up the alphabet, each student taking on two letters, assigned by lot.

Because the student authors thought they could not say some things at a child's level, they decided to write a manual for parents and teachers titled *Beyond the ABC's of Appalachia*. The authors tried to anticipate questions the children might ask, to suggest activities, and to elaborate on each of the topics at an adult level of understanding. The manual contains an annotated bibliography of all sources consulted.

Writing The Book

The book-writing project was like a research paper in that it did not take away from class time; the work took place outside of class or in very short discussions before or after class. The students also wrote abstracts summarizing their assigned readings and weekly journals setting their own ruminations on paper.

Each student wrote a prospectus including ideas for a book title, the age group for the book, the purpose and need for the book, its proposed content and format, proposed topics for specific letters, and an annotated bibliography. Later came a rough draft of each letter and a group meeting to critique the draft. The writings, convoluted in style and overrun with social science jargon, often sounded like mini-research reports, which the authors noted would not hold their own interest, much less the children's. We, therefore, decided to meet with an education specialist to help us write at a child's level. Prior to consultation, an early draft of "B is for Banjo" read like this:

The banjo is a very popular instrument in many types of music including a great deal of Appalachian country, gospel, blue grass and folk music. Playing the banjo is an important part of Appalachian culture because it provides entertainment; it is a good way of expressing feeling and it is a great leisure time activity....

With more work and consultation, this evolved into:

Within these tall mountains and quiet valleys, there is a very special kind of music that is made by a family of instruments. One of these is the banjo.... Many banjo players in Appalachia make their own banjos. Could you imagine making one instead of buying it from the store?

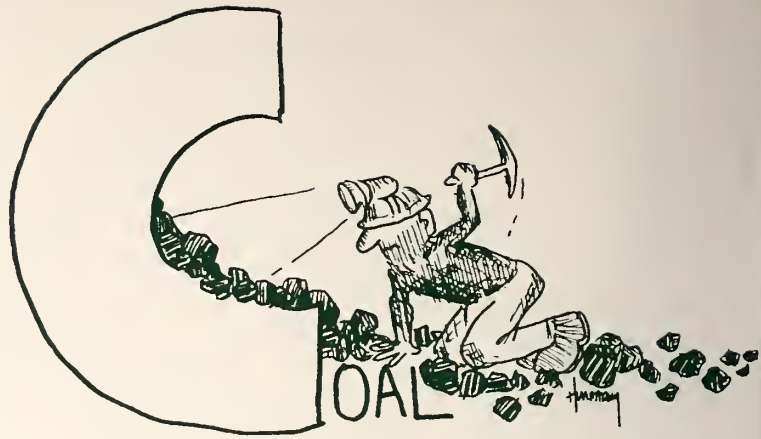
A few examples of some of the other letters and their subjects include: "A is for Appalachia," "C is for Coal," "D is for Dulcimer," "K is for Kinship," "Q is for Quilts," "S is for Square dancing," "T is for Tanning Hides," "U is for Urban Appalachians," "X is for Xenophobia," and "Z is for Zither."

The final phase of the book project included the final drafts, typing and proofreading, cover design, printing, distributing copies to the class, and an after class "autograph party" to celebrate the class's sizable achievement.

Advantages of the Book-Writing Project

The authors learned about Appalachia and images associated with it as they determined what was important for a child to learn about the region. Another advantage, not one I had planned but one mentioned by the class in their evaluations of the project, was that the joint experience brought the class closer together. Students said they enjoyed "getting to know the people in the class" and "working with the whole class as a team." They thought "the class got more relaxed and closer."

An added benefit, one I had on my hidden agenda, was the improvement of the student authors' own writing as they worked and reworked a few pages of text, over and over



again. I felt these students cared more about their piece of this group-written book than previous students in the same class had cared about any individual research project. The students' concern with their writing was evident in many ways. Work on the project began early and continued all quarter; students made and kept deadlines; they actively searched for source materials; they cooperated with each other by sharing information and resource materials; they shared the results of their writing with one another; and they critically responded to one another's work. As students worked, they generated an almost tangible pride in the book and concern that it be good and look attractive.

At the end of the course, I learned why students cared more about this project than writing a research paper. They said, "we can't get excited about writing something which only you will read and then only once"; "we learned more writing this book than doing an individual project because we heard and read what others in the class had discovered about a wide range of subjects"; and "if we had done research papers, we would have picked topics we already knew a lot about, so it wouldn't have been so much work." I was floored by their honesty and dismayed at the prospect of reading research papers in future courses.

A fourth, unexpected benefit was that the class became a microcosm of today's scholarship in Appalachian studies, as students worked through what should and

should not be included in the book and how various subjects should be handled. Students clearly learned a great deal about Appalachia and developed insights into the state of Appalachian studies.

The project brought up controversial issues scholars face in Appalachian studies. The study of Appalachia has historically been represented by two sides: the hard element (politicoes) who ask "Which side are you on? Do you want to ignore and/or maintain an oppressive status quo, or change things?" and the soft element, the ones who say they are on neither side, but instead are observing, trying to understand. In their original prospectuses, the students wrote that the book should be realistic, pleasant, and entertaining, and not "stereotypical." We argued about the mix of "realism" and "pleasantness" the book should have. For instance, should "O" be for Oppression (or Outside Ownership of land and minerals) and "P" for Poverty? "No, that's too harsh for children," said some of the students. "But it is real," countered others. One student reminded us that we were building a stereotype of our own, but that it would be a more balanced and positive one, and thus a worthwhile project to do.

A second issue in Appalachian studies focuses on "insiders" vs. "outsiders." Occasionally someone says that outsiders have no business studying Appalachian cultures and that they especially have no business taking on elements of Appalachian culture, since it can not be worn like a pair of boots. Anthropologists counter that this strikes at the very heart of the anthropological enterprise, understanding a culture by becoming a participant observer, taking on an insider's/outsider's role. At other times, an academic born and raised in Appalachia will state what "we Appalachians want/need"; it is hard to imagine that he is speaking for all Appalachians everywhere. Outsiders, on the other hand, say insiders cannot be "objective" as social scientists seek to be.

We had both insiders and outsiders in the class. Even the insiders' backgrounds varied--some hailed from coal fields and others from farm counties. The Appalachian students recalled that at various times in

their lives they had felt bewildered by differences between themselves and their student colleagues. At other times they had been proud of their differences. Sometimes they wanted to be more like the students around them, judging those ways more functional in middle class American life. Some made a conscious effort to sort through their own cultural traits and decide which to keep and which to jettison. Some thought they were bicultural--able to take on the style of the middle American or the mountain person, changing as the setting required.

By and by, the non-Appalachian students confessed that they held stereotypes about Appalachian people and culture, and they felt different from the local students. A simple example is the willingness of locals to say hello to a stranger while walking on campus. The students from northern Virginia viewed this familiarity as strange, even threatening. The kids from the Highlands felt threatened when people did not say hello.

Student evaluations of the project indicated that it was "highly motivating." "It would be great if everything we wrote would be used." Then we might be inspired to strive for perfection." "Our efforts weren't solely going for a grade." Indeed, the students' work was used. The class received a grant from Radford University Foundation's Faculty Instructional Development Program to create multiple copies of the two books and distribute them to school teachers and pupils. The teachers evaluated the books, and some of the student authors reworked them for Independent Study credit. The improved books were distributed widely--from Girl Scouts in Virginia to the San Francisco Bay Area Writer's Project (carried there by Writing Across Curriculum leaders who visited Radford University). Student authors were asked to discuss the project at a half dozen conferences for teachers and Appalachian Studies scholars. Eleven years later, we still get requests for *The ABC's of Appalachia*.

Melinda Bollar Wagner
Radford University
Radford, Virginia

THE FLEA MARKET: AN ECONOMIC ANTHROPOLOGY CLASS PROJECT

How could I design an economic anthropology course to make it "come alive" for my students? I have found that experiential class projects add an important dimension to the learning experience by enabling students to apply their readings and lecture materials to real-life situations. As an anthropologist I believe strongly in using experiential projects that immerse students in a local culture, providing a long-term, deep involvement inside the culture rather than just a quick, outsider's look at the culture. For this class, I especially wanted to enhance the reading and discussion of marketplaces and market vending (a focus of my own research). Since the marketplaces outside the U.S. seem too remote and not relevant to the students' own lives in a mass consumer, mall-based economy, I looked around the New River Valley for a semester-long experiential project. I soon realized that the marketplaces of Peru and Mexico look very similar to something the students have in our own local culture--the open-air marketplaces we call "flea markets." And so the flea market project developed as a semester-long class project for my Economic Anthropology class.

Description of the Class Project

To the casual observer, American flea markets are chaotic jumbles of odd people selling displays of junk. Through the class project, students learned that the flea market is far more intricate than might appear on the surface--a highly complex structure consisting of multiple layers of social and economic interaction.

The class focused their study on two aspects of the marketplace: 1) the structure and organization of marketplaces; and 2) the types of vendors selling in the marketplaces. The students divided the marketplaces into three categories ranging from the smallest (yard sales) to the largest (the biannual Dublin Flea Market). Intermediate marketplaces included weekly marketplaces located along major roads and in parking lots. The students studied differences and similarities in the types of vendors by

interviewing them about their activities and the reasons they sold in the marketplace. Students documented various ways vendors used the marketplace in their overall livelihood strategy.

In class, students received related reading assignments (the professor's own work in Peru and Rhoda Halperin's study of flea markets in the Kentucky region of Appalachia), learned how to conduct fieldwork, and discussed the ethics of interviewing [see James Spradley, *The Ethnographic Interview*, 1979.] Students met weekly to discuss their progress and problems, to share information, to plan subsequent stages, and to divide the work amongst themselves.

At the end of the semester, each student turned in a paper containing 1) an analysis of the group's research findings on market places in the New River Valley, and 2) a cross-Appalachian comparative analysis of the group's findings with Halperin's study of Kentucky marketplaces. The quality of the research and the papers was impressive. The written evaluations and oral testimony indicated that the majority of the group thought the project was an important part of



their learning experience. In fact, four undergraduates asked to continue their participation beyond the semester.

So the flea market project grew into a longer independent study project designed to give the students experiential training in all stages of the research process from participant-observation, to data analysis, to professional paper presentation.

The Role of Participant-Observer

The students assumed the role of participant-observers in addition to using the techniques of mapping and interviewing. They rummaged around for things to sell and rented spaces at the Dublin Flea Market on a number of occasions, setting up their own displays to become market vendors. This experience opened up a whole new world for the students. Clearly looking like naive "newcomers," students received unsolicited help from seasoned vendors who clued them in on the social rules of the marketplace and gave them tips on how to sell their items.

Becoming fellow vendors or "insiders," the students were told things about the marketplace they probably would not have otherwise learned, such as social norms among vendors, selling strategies, personal attitudes about flea market selling, personal reasons for selling (i.e., making deep friendships), kinship relationships among vendors, and ways vendors used vending as one part of their multiple livelihood strategies. The students learned that flea marketing was not strictly an economic activity; many vendors enjoy the friendly atmosphere in which they can expand/solidify their social networks. Students came to realize they were learning far more by becoming participant-observers than just by observing or even by interviewing.

This project gave me an opportunity to guide my students through all stages of an anthropological research project--from fieldwork, to the analysis of the data, and then to the final stage of writing. What started as a class project for an economic anthropology class in the Fall of 1991 grew into a one and a half year learning/research

project for four undergraduates, who eventually presented a collaborative paper at a regional professional meeting, a real capstone to this class project and to their experiences throughout.

Mary B. La Lone
Department of Sociology/Anthropology
Radford University

* * * *

EPILOGUE: The success of Wagner's and La Lone's first class field projects led to additional, more recent projects. Wagner's students in an Anthropology of Religion course analyzed the relationship between conservative Christianity and American popular culture by comparing the commercial products of each, seen through novels, message buttons, bumper stickers, etc. In 1993, La Lone's students assisted a local Appalachian town with a grassroots development project, since the town's coal industry has been in rapid decline. The class researched forms of economic development including tourism that could be helpful as the town seeks alternative economic opportunities.

* * * *

Notes to the Teacher's Corner

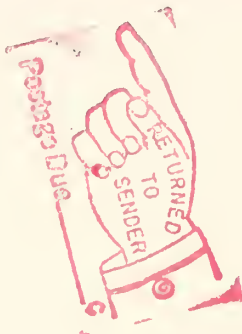
1. A longer article by Melinda Bollar Wagner describing the book project, "Analyzing the ABC's of Appalachia: University Students Write a Children's Book," is published in *Focus: Teaching English Language Arts* (Ohio University, Athens, OH, Winter 1984).
2. "The Flea Market" article is based on "Case Studies: Teaching Economic Anthropology by Immersing Students in the Local Culture," by Mary B. La Lone, the second half of a presentation at the American Anthropological Association November 1993 annual meetings titled "Ethnography as a Teaching Tool: Immersing Students in the Local Culture," by Wagner and La Lone.

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A CASE OF MISSING PERSONS: CULTURAL RELATIVISM IN TODAY'S WORLD



Introduction

In the nineteenth century, ethnologists quite regularly documented "exotic" customs such as human sacrifice, infanticide, and ritual suicide. In the early twentieth century, as cultural relativism emerged as a strong value in the discipline, cultural anthropologists, for the most part, avoided writing about such practices. Rather than debating the moral issues that one encounters when learning about another culture, anthropologists concentrated on topics like kinship systems, agricultural practices, leadership patterns, and myths. Today, a growing interest in defining universal human rights has ignited a lively debate within anthropology about cultural relativism.

Cultural relativism, the principle that cultural traits are best understood in the context of the cultural system of which they are a part and, therefore, not subject to external or absolute standards, became a central tenet of cultural anthropology, particularly as anthropologists sought to dispel notions of racism and ethnocentrism in the early twentieth century. Cultural relativism asks us to engage in a "suspension" of our values so that we might interpret other peoples' customs in the context of their cultures. To do otherwise -- to judge other peoples' customs from our own culture's viewpoint -- often leads to ethnocentrism, or the belief that one's own culture and its values are superior to that of others.



Many anthropologists still hold to some form of "absolute cultural relativism" by which anything that is acceptable in any one culture has to be viewed as acceptable by an outsider seeking to understand the practice. My study of contemporary patterns of female infanticide, sex-selective abortion, and general neglect and abuse of females in India has led me to a revised view that I call "critical cultural relativism."

Studies in Mortality

Population dynamics can be grouped under three major areas of study: fertility (reproduction and population growth), mortality (death), and migration (population movements). Both population anthropology and medical anthropology address these topics, but population anthropologists have paid far more attention to studying fertility and migration than to studying mortality, until recently.

Mortality is more difficult to research in a typical fieldwork period (one year) and within the traditional fieldwork setting of a village or urban neighborhood. In one year's time, several births might occur in a village of 1,000 people, and many people may migrate in and out. But only one infant death may occur, and no murders or suicides.

Death may, of course, occur randomly, with no discernible pattern associated with a particular person's death, at a particular time, or from a particular cause. Death is often the result of biological factors that impair the body's functioning, such as a malformation in an infant's heart. In short, there often are non-cultural factors determining the time and cause of death.

Culture and Mortality

In many cases, culturally-shaped patterns play a key role in putting certain people more "at risk" of dying from a particular cause, or at a particular age, than otherwise. We only have to look at statistics on mortality from car accidents in the United States, and especially from car accidents in which alcohol is involved, to see that such deaths are not evenly spread throughout the population. Culturally prescribed roles for adolescent males that involve "macho" type display behavior, excessive alcohol consumption, and otherwise dangerous lifestyle features are obviously implicated in the much higher mortality rates they experience, compared to females and older age groups.

Starting even before birth, an infant's chances of survival are influenced by culture. In societies where women are overworked and undernourished because of culturally constructed patterns of discrimination, infants are likely to be smaller and therefore less likely to survive infancy than in societies where prenatal care receives more attention.

In some societies, once a baby is born, culture plays an immediate and direct role in deciding whether or not the child will live. Abundant evidence from around the world documents the deliberate killing of offspring as almost a cultural universal. However, infanticide is usually not a frequent or widespread phenomenon within any particular society as a whole.

The mechanisms of infanticide differ, historically and cross-culturally. Infanticide refers to deliberate killings of juvenile offspring, but the word "deliberate" is not easy to define. Marvin Harris, a leading American anthropologist of the cultural materialism tradition, has contributed much to

contemporary thinking on infanticide. He distinguishes between direct and indirect infanticide.

Direct infanticide is the intentional killing of a child, by such common methods as poisoning, exposure to weather, smothering, or strangling. Indirect infanticide is more subtle and may not be exactly "deliberate." Indirect infanticide results in the death of a child through such practices as neglect in care and treatment. For example, not feeding a baby enough leads to malnutrition and lack of resistance to disease, and not taking the child to the clinic for treatment of an illness may allow the illness to progress to a terminal stage.

In different cultures, different children are at risk of infanticide. For example, it may be children born with teeth, since they are believed to be witches, or one of a set of twins since twins are widely believed to be inauspicious, or firstborn boys. Considering all the evidence we have for infanticide cross-culturally, we can say that the preponderant cases of systematic infanticide -- infanticide that is practiced by comparatively many people in the society, through history -- are systems of female infanticide.

In the United States, there are substantial numbers of infant murders and untold cases of fatal child abuse each year. But victims do not seem to be consistently more of one gender than another, as far as current statistics indicate (although cases of sexual abuse tend to involve far more cases of female children as victims).

Rural India: A Case Study

Information about son preference and daughter neglect in rural India (80 percent of India's population lives in rural areas) provides solid

clues to the problem of why and how so many girls die. However, there is still much that is not known, and cultural anthropology can play an important role in generating further knowledge that might be useful to health planners. In addition, there are people in India who do not support the discrimination against females, who are working to encourage new social policies to promote equality between the sexes in Indian society today.

We know that the most extreme and widespread scarcity of girls is seen in the northwestern region of India. This pattern is similar to the distribution of direct infanticide as revealed through a study of reports from the 1800s. For more contemporary periods, census data collected by the government of India every ten years, throughout the nation, allow us to calculate "sex ratios" (that is, the number of boys per girls, so that "perfect" balance -- although this rarely occurs -- would be 100 boys for every 100 girls).

Biologists have shown that in humans, the sex ratio at conception is 120:100, with more boys than girls. Despite the fact that female embryos have a higher mortality rate than males within the first two weeks of conception, the mortality rate of males is greater than that of females at every age thereafter. By birth, the sex ratio has fallen to about 106:100 in most documented populations, and throughout the life span, the ratio continues to fall. The result is that there are more males than females in the younger generations, but increasingly more females than males in the older population.

Research on juvenile sex ratios (for under ten-year-olds) in India shows that in some areas of the northwestern plains, ratios exist of 115-120 boys for every 100 girls. This means that one of every five or six girls dies an excess

death compared to boys.

Daughters and Dowries

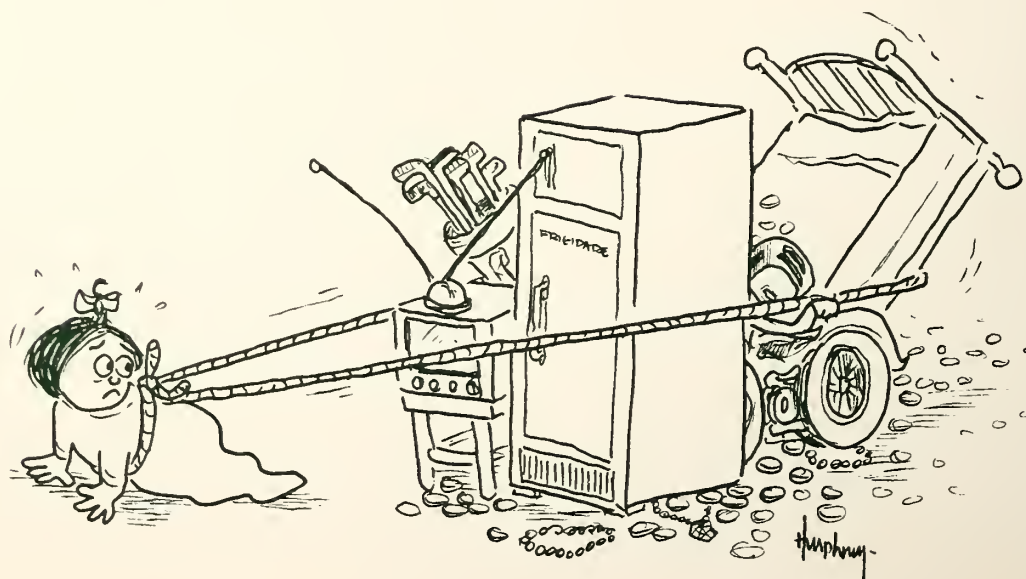
One might guess that the poverty of India drives people to kill female infants or to let them die through neglect. But in India, the scarcity of daughters has consistently been greatest among the "propertied" class -- farmers who own their land, as compared to landless agricultural wage-workers -- and upper caste groups in the north. This social pattern causes perplexity among many people in the United States, since most Euro-Americans have a "rationality" model of "child investment," a model which sees poverty, not wealth, as a force driving people to do difficult and unpleasant things to other people.

Why, then, does female infanticide and neglect make sense from the perspective of the propertied class? North Indian propertied-class cultural rules of marriage, in conjunction with the limitations for women's wage earning in this class, make daughters a very costly burden to raise. It is essential that a girl be

married, since spinsterhood is a great stigma for her and her family, and she must be married to a boy of a somewhat higher socioeconomic status, requiring a very expensive dowry. North Indian-style dowry includes goods such as furniture (refrigerator, bed, motorcycle, watch, clothing, jewelry) and, increasingly, large sums of cash. The better the dowry, the "better" the groom's family will be. If a family seeks to marry off a daughter well, the expenses will put them in debt for many years. That burden is even greater if there is more than one daughter to be married.

Therefore, having a limited number of daughters is a poverty *avoidance* strategy for those who are *not* poor. The problem with having more than one daughter is not that the family cannot afford to feed them as children, but that they cannot afford to get them married properly later on.

Consider in the North Indian propertied group context the difference between having sons versus daughters. If you have a son, you can expect that he will "bring in" with his bride a



substantial sum of money and goods, because in this kinship system, daughters "marry out" of their natal family (exogamy) and take up residence in their husband's natal home or village.

As dowry is evolving in India in the 1990s, more and more of its contents goes to the groom's family rather than to the newly-married couple. If a family has several sons, it is likely to be in very good financial shape. Incoming dowry through one's sons' marriages can be used, in turn, to pay for the dowry of one's own daughter(s). Given this system, a parent wants to have more sons than daughters.

Among the poor, although dowry has become more common since the 1970s, daughters were traditionally married with no dowry, or even with the transfer of bridewealth or brideprice. Bridewealth is usually a cash amount of a fixed rate which is transferred from the family of a groom to the father of the bride. Compared to dowry, brideprice is a much smaller amount, and a prospective groom can work to earn it himself rather than being totally dependent on his family to provide it. Imagine, in this system, if you were the parent of several daughters; the prospect of receiving bridewealth would make a big difference in your attitude about having daughters.

Impact of Modernization

Modernization theorists claim that with increasing urbanization, industrialization, and education, discrimination against girls and women declines. But over the past several decades, the scarcity of girls in India has been spreading, both regionally and socially. Comparison of unbalanced juvenile sex ratios from the decade 1961-1971 revealed that a substantially greater number of districts had "suspiciously high" sex ratios in 1971 than in

1961: from one fourth of all India's districts up to one-third. Geographically, the problem is spreading outward from the northwestern core area into all directions.

Another major change since the 1980s is the increasing use of medical technology to learn the sex of a fetus and to seek an abortion in the case of a female fetus. This technology is now widely available in India, even though its use for sex-selection purposes was recently banned by the national government. Statistics from a large study of births in northwestern India reveal that people are aborting female fetuses in large numbers. Sex ratios at birth are reaching 115-120 boys per 100 girls, similar to what was previously the result of indirect infanticide in the same area. (Compare the expected "normal" ratio of about 106 boys to 100 girls.)

Recent evidence of direct female infanticide has also emerged in several rural areas of the state of Tamil Nadu in far southern India. It is not currently known whether this is a new practice or whether it has been going on for a long time and simply unnoticed by researchers and health care workers. The state government of Tamil Nadu, which is relatively progressive concerning women's issues, has taken several steps to help stop this practice, including setting up "drop boxes" for unwanted female babies who can then be adopted, and offering to pay marriage costs for daughters once they are grown.

The Anthropologist and Social Policy

Should anthropologists who study groups made vulnerable by societally defined conditions of inequality become involved in policy and action that alleviates such inequalities? Emphasis on key areas of research can add much to our understanding of how and why people are systematically

disadvantaged by their culture and anthropologists can suggest ways to improve their situation.

According to absolute cultural relativism, anything that goes on in any culture is "just fine" because, it is said, no one has the right to judge the rightness or wrongness of any behavior or belief, and such judgment would be ethnocentric. According to this view, anthropologists should maintain their objectivity and remain uninvolved in policy or social action.

Consider where this position leads by looking at one of the horrors of the twentieth century: the Holocaust during World War II. Millions of Jews and other minorities in much of Eastern and Western Europe were killed as part of the German Aryan supremacy campaign. The absolute cultural relativist position would hold that the Holocaust was undertaken according to the values of the culture in which it occurred, so who are we to say anything about it?

Can anyone feel truly comfortable with such a position? We have to ask, "Whose culture supported the values that killed millions of people on the grounds of racial purity?" It was not the culture of the Jews and the Gypsies. It was the culture of Aryan supremacists, who were a subgroup primarily of Germans. We have a much more culturally complex picture than a simple absolute cultural relativist statement can take into account. There was not "one" culture and its values involved. Rather, we see an example of cultural imperialism at work, whereby one culture claims supremacy over minority cultures and proceeds to exterminate the latter in the interests of the former. We can perceive oppressors and victims.

Critical Cultural Relativism

An alternative conceptual option is what I term *critical cultural relativism*. This perspective is situated within the general framework of cultural relativism, whereby we try to view all cultures empathically from the inside. But it is more specific. It prompts us to understand the plural interests within any society (whether it is between Nazis and Jews, the old and the young, the rich and the poor, men and women, the able and the less able) and to understand the power relationships between these interest groups. We must critique the behavior of these groups from the standpoint of some set of more or less generally agreed upon human rights.

French anthropologist Claude Lévi-Strauss commented that "No society is perfect," even when considered from what that society claims as moral values. He pinpoints the difficult position of the anthropologist who looks from one culture to another. The predicament is how to maintain what could be called scientific objectivity. Lévi-Strauss claims that the task of the anthropologist is to study "the other" without passing judgment. Other anthropologists claim, to the contrary, that since one cannot ever achieve true objectivity, the best we can do is examine and expose our own biases, and then try to treat all cultures equally, to look equally critically at all cultures -- one's own and "others." Critical cultural relativism tries to do this in terms of a set of universal human rights.

Cultural anthropologists following a path of critical cultural relativism face the challenge of what might be considered universal human rights; that is, rights that should be guaranteed to all people everywhere regardless of their culture. Defining human rights in a cross-cultural perspective may seem like an easy task. For example, we might argue that the

right to food and health care should be universal. But the case of India's missing millions of girls illustrates just how difficult this might be.

Extreme cultural relativists argue that a balanced sex ratio, or even gender equality in health and welfare, is ethnocentric, and since they do not seem to apply to India, then they are not appropriately applied there. In such a view, an unbalanced sex ratio -- achieved through female infanticide and neglect and sex-selective abortion -- is culturally appropriate and acceptable.

Indian Activists

One can argue to the contrary, though, because many people in India are "egalitarianists" and do not support the inequality that does exist. As the following story, told to me by a long-time medical doctor serving in the rural areas of northern India, indicates, little girls who are discriminated against are also able to express their unhappiness with the situation, at least through their tears:

In one village, I went into a house to examine a young girl, and I found that she had an advanced case of tuberculosis. I asked the mother why she hadn't done something sooner about the girl's condition because now, at this stage, the treatment would be very expensive. The mother replied, "then let her die, I have another daughter." At the time, the two daughters sat nearby listening, one with tears streaming down her face.

In India, activists are working on many fronts to try to equalize life chances for males and females, from political lobbying against sex-selective abortion to grassroots work with parents, teaching them the value of daughters.

Cultural anthropologists can contribute to a more precise understanding of just where, and in which groups, little girls are at most risk of dying so that appropriate action might be taken to remedy the situation. And they can help with better understanding of how and why this happens, so that policies might go to the root of the problem and not just the surface. Cultural anthropologists could carry on research in the following arenas, showing:

1. How schooling affects attitudes toward sons and daughters and other matters such as dowry marriage and women's work. While many scholars insist that "education is the key," ironically the data for India show that, in northern India, the poorest and least educated people are less discriminatory toward daughters than many more well-off and educated people. In India, being educated goes with middle and upper class lifestyles, and such are not necessarily egalitarianist; indeed, they may be extremely conservative when it comes to women's rights.

2. How more and better health care provisions might affect female child health and survival. Some scholars argue that if more clinics were available, then parents would care for children of both genders more equally. Currently, however, studies show that parents in the northern part of the country are using better health care facilities for their sons, not their infant daughters, even when the distance to the clinic is not great.

3. How women's work affects gender patterns of child survival. Development studies demonstrate that, worldwide, children's welfare responds more positively to an increase in maternal earning power compared to an increase in paternal earning power, because mothers more than fathers use their income for household welfare expenditures. In northern India, where strong negative

sanctions exist about women's work for rural middle and upper-class families, it is difficult to know how women's earnings could be enhanced and if women would have the intrahousehold power to allocate earnings toward equal treatment of children.

4. How mothers deal psychologically with the loss of children. Is maternal grief a Western luxury that rural Indian mothers are socialized against? How do parents and other household members speak about the deaths of children, wanted or unwanted? And how is this changing, given the now widespread availability of television with its international messages about behavior, emotion, and discourse?

Although more is known now than fifty years ago about the cultural dynamics of India's missing females, the entire story is only slowly and unevenly unfolding. Much more needs to be known. In the United States, in addition, we must face the fact that increasing numbers of parents are seeking sex-selective abortion. The problem of gender-specific reproductive wishes is not just "over there," but increasingly in our own culture. Critical cultural relativism helps us to better understand cultural practices and actions desirable to take, given certain norms of universal moral behavior and universal human rights.

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About Barbara Miller

Barbara Miller first became interested in India in elementary school and as a senior in high school took a course in cultural anthropology at a local college. While an undergraduate at Syracuse, she participated in a year-long study program in Banaras, India. She received her PhD, with distinction, from Syracuse University in 1978. She plans to return to India for extended research in the future.

Barbara's research interests include child survival, women's health status, the cultural construction of morbidity and mortality, migration and mental health, intrahousehold dynamics, public policy regarding the household, and rural development in relation to population dynamics. She has done field research in India, Bangladesh, and Jamaica, and has coauthored a book on Sri Lanka.

For Further Reading

Jeffery, Patricia, Roger Jeffery and Andrew Lyon, *Labour Pains and Labour Power: Women and Childbearing in India*, London: Zed Books, 1988.

Miller, Barbara D. *The Endangered Sex: Neglect of Female Children in Rural North India*, Ithaca: Cornell University Press, 1981.

Rohner, Ronald P. and Manjstri Chaki-Sircar, *Women and Children in a Bengali Village*, Hanover, NH: University Press of New England, 1988.

Waldron, Ingrid. "Why Do Women Live Longer than Men?" *Social Science and Medicine* 10:349-362, 1976.

NEW RESOURCES: NORTH AMERICAN INDIANS AND ARCHAEOLOGY

AnthroNotes editors highly recommend three recently published books that can help teachers and students gain a greater appreciation of Native peoples of North America, while gaining a better understanding of the various approaches to learning about other cultures, past and present. The three books, reviewed below, are:

The First Peoples of the Northeast. By Esther K. Braun and David P. Braun. Lincoln Historical Society, P.O. Box 6084, Lincoln Center, MA 01773-6084. 160 pages, softcover, 90 illustrations, time line, resources, bibliography, index. To purchase, send \$19.95 plus \$3.00 first book, \$.50 each additional book (postage and handling).

Earthmaker's Lodge, Native American Histories, Folklore, Activities and Foods. Edited by E. Barrie Kavasch. Cobblestone Publishing, Inc., 7 School Street, Peterborough, NH 03458, Tel. 800-821-0115. 160 pages, softcover. map, glossary, index, and pronunciation guide, illustrated with original art. To purchase, send \$17.50 plus \$3.00.

Discovering Archaeology, An Activity Guide for Educators. By Shirley J. Schermer. Special Publication, Office of the State Archaeologist, Oakton Hall, The University of Iowa, Iowa

City, Iowa 52242. 1992. vii + 54 pages, glossary, references, appendices, illustration credits. To purchase, send \$6.95 plus \$3.00.

The First Peoples of the Northeast

The First Peoples of the Northeast, designed as an archaeological and cultural overview for junior high-level through adult readers, provides an introduction to the geography and original peoples of New England, New York and the Canadian eastern province. This handsomely illustrated and beautifully printed volume serves as an excellent introduction to archaeology, a subject of increasing interest to precollege teachers and students. Well written and heavily illustrated with maps, photographs, and original drawings by Carole Cote, the *First Peoples of the Northeast* is highly recommended for school libraries, museums, educators, and classroom use.

Synthesizing recent archaeological research, the book traces chronologically the peoples of the Northeast from the time of the Ice Ages through the development of diverse cultures, covering the broad span of time from the region's first human occupation to the period of European contact. Written in clear, non-technical language, the book focuses on the peoples and cultures of the region, while showing how those cultures are revealed and interpreted through archaeological evidence.

Seven chapters detail the culture history of the area, beginning with chapter one, "The Ice Ages and the First Americans," and ending with a chapter on "European Contact," which details the impact of contact on various societies throughout the region. The eighth chapter, "Archaeology and Conservation," describes three reasons why there is so much difficulty documenting the development of

Native American cultures before contact: the lack of written records and more recent disappearance of much of the oral history; the fact that archaeology is a young science with few means by which to understand the evidence that does exist; and the destruction of the archaeological record, which is creating a massive loss of potential information.

In a plea for site conservation and stewardship, the Brauns write: "You can think of the archaeological record as if it were an ancient book, the only copy left. Already many pages are missing, torn, written over, or faded...often...someone or something comes along and tears out a page or more, or tears out a chunk, or writes over a page... Soon we will lose what little is left."

Following the main chapters of the book, the Brauns offer two extremely helpful appendices: "How Archaeology Works," and "Places to See Archaeology Exhibits and Report Archaeological Finds." The first provides an excellent introduction to the discipline of archaeology, with sections on "Goals of Archaeology," "Finding the Evidence," "Testing and Excavating a Site," "Studying and Dating the Evidence," and "Understanding Past Ways of Life." Following this appendix is a listing of places where one can learn more about the archaeology of the Northeast, with address and phone numbers as well as resources available.

The authors are an interesting mother-son team. Esther, a graduate of Wellesley College with an MA in Education, spent many years, before retirement, teaching math, science, and social studies in the Lincoln, Massachusetts Public Schools. David Braun, a graduate of Harvard University, received an M.A. and Ph.D. in archaeology from the University of Michigan. He went on to pursue a career in archaeology, publishing numerous articles and

chapters in thirteen different books, while teaching at Southern Illinois University and Northern Arizona University and working as a Fellow of the School of American Research in Santa Fe. Ten years ago, the two decided to collaborate on this book, which has been a labor of love for them both, a unique contribution from an unusual and talented team.



The First Peoples of the Northeast presents a remarkable combination of important strengths: a lively writing style; helpful, numerous illustrations and maps; a clearly conceived organization. There is a rare combination of attention to a narrative that focuses on real people's lives during real periods of time while at the same time explaining the scientific methodology that gave rise to the information presented. The emphasis on conservation is particularly noteworthy given the impact that the "Save the Past for the Future" effort has had within the Society for American Archaeology, and the importance of building an ethic of stewardship, not only towards archaeological sites but towards our whole natural world.

Earthmaker's Lodge

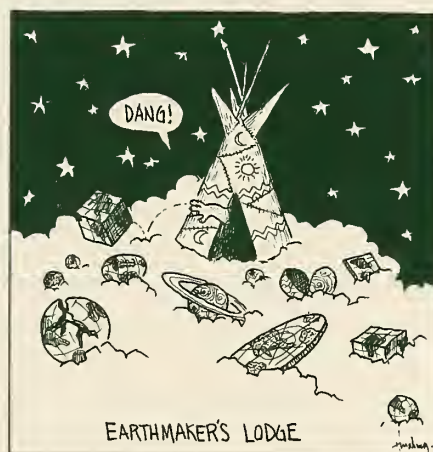
Offering another view of Native American life, *Earthmaker's Lodge* is a classroom and library resource book, arranged by topic and geographical region, of Native American peoples from the arctic to Mexico. Some of the material is adapted from Cobblestone publications (*Cobblestone*, *Faces*, *Odyssey* magazines), while other parts are written specifically for this collection, much of it by E. Barrie Kavasch, author and illustrator of *Native Harvests: Recipes and Botanicals of the American Indians*, herself of some Cherokee and Creek Indian descent.

Earthmaker's Lodge is geared to grades 4-9, and is recommended for incorporation into social studies, reading, and language arts classes. The book's approach, along with its Index organized by tribal culture areas, and its Glossary of Native Peoples, makes the collection particularly useful for teachers.

An introduction welcomes the reader, describes the book's format, and explains that *Earthmaker's Lodge* "symbolically embraces North America in the relaxed, informative ways traditional to our tribal storytelling." The collection encourages teachers to introduce Native American stories to their students as "links between our surroundings, our imaginations, and our creative understandings." The title of the book refers to Earthmaker, the creator of earth and sky and of all the inhabitants of the world, in the Winnebago, Osage, Cherokee, and Pima Indian traditions. Other traditions recall the Creator by other names, and fortunately many creation stories are included in the collection.

There are five main sections to the book. Part I, "Stories, Dreams, and Spiritual Objects," describes the place of stories, dreams and spiritual objects in the lives of North American

Indians and offers activities that young students can do, such as making a story bag, keeping a dream journal, or creating a spirit plate. Part II, "People, Places, and Legends," is the longest section, and includes many original North American Indian stories and legends organized within twelve geographic, tribal culture areas: Pueblo, Navajo, California Indians, Iroquois and Algonquian Tribes of the Northeast, Cherokee and Other Southeastern Tribes, Great Lakes and Mississippi Valley Tribes, Plains Indians, Nez Perce, Sioux, Northwest Coast Indians, Eskimos, and Hawaiians. The stories explore the concepts of ancient times and how people, plants, and animals came to be. Each area varies in its treatment, but, in general, original stories and legends are combined with short, well written introductions to the culture area and its varied tribal groups.



Part III, "Projects and Crafts," includes instructions for teachers for twenty-four different activities; while Part IV, "Puzzles and Games," continues an activity approach with descriptions of twelve different games of skill and chance traditional to different Native American societies. Finally, Part V, "Recipes" offers contemporary recipes from different regions, reminding us that Indian societies continue today as vital, creative communities. As W. Richard West, Jr. Director of the

National Museum of the American Indian, Smithsonian Institution, concludes in his introduction to the book: "*Earthmaker's Lodge* is an excellent means for sharing the vibrant customs and cultures of American Indians with all people. By presenting the history, stories, and the many foods and crafts of American Indians, this book shares the gifts of the Indian peoples and opens the doors into their world. I ask that you read this book with an open mind, remembering that American Indian cultures are living cultures with a dynamic past, an active present, and a promising future."

Discovering Archaeology

A concisely written, clearly organized, and highly informative publication, *Discovering Archaeology, An Activity Guide for Educators*, should prove helpful to teachers in a wide variety of classroom situations. Designed as an activity guide for middle school students (grades 5-8), this book is an excellent introduction to archaeology for teachers of elementary, junior high, and high school students. Collaboratively developed by archaeologists and educators, all activities have been field tested and then revised through teacher workshops.



The organization of the book makes it particularly easy to use with students. An introductory two page statement, "What is Archaeology," is followed by six sections, each one including a short introductory statement with between one and three related, illustrative activities. The introductory statements, read together, provide a concise yet quite comprehensive overview of the field: "Evidence from the Past," "The Work of Archaeologists," "Pottery," "Prehistoric Use of Natural Resources for Tools, Shelter, and Food," "Birds in Prehistory," "Archaeological Ethics and Law."

Discovering Archaeology is more than an activity guide, serving as an excellent short introduction to archaeology. The book could be used as the basis for a two week archaeology unit in the middle school, junior high school, or even high school curriculum, or incorporated into courses about Native Americans, American History, state or local history, or the environment. Diagrams and pictures help students and teachers visualize the written descriptions and carry out the various activities. The six introductory statements are clearly written, with all technical terms bolded and defined in a short glossary that follows the main portion of the text. A Reference Section serves as a guide to further resources, and includes subsections on archaeology books for teachers and students; teaching materials, curriculum guides and activities; American Indian mythology; magazines and journals; and materials available from the Smithsonian Institution.

The activities are excellent: interdisciplinary, inductive, straightforward, creative and fun. Students should enjoy participating in these activities, and teachers will find most of them easy to set up and carry out -- no small consideration for the extremely busy teacher who is with students most of the day.

Activities include learning what artifacts are and how archaeologists learn to identify their attributes and functions (Activity 1. What is an Artifact); the difference between practical and symbolic objects (Activity 2. Symbolic versus Practical Objects); how archaeologists survey and collect materials (Activity 3. Picnic Ground Archaeology); how archaeologists use stratigraphy to date objects (Activity 4. Garbage Can Archaeology); excavation procedures including field notes and artifact sketches (Activity 5. Simulated Archaeological Dig); prehistoric pottery making techniques (Activity 6. Pottery Making); prehistoric use of natural resources (Activity 7. Resources for Tools and Shelter); environment as the source for satisfying basic human needs (Activity 8. Resources for Food); identifying animal skeletal materials (Activity 9. Bird Identification); archaeological ethics and law (Activity 10. Archaeology and You).

Overall, *Discovering Archaeology, An Activity Guide for Educators* is an excellent addition to the growing list of high quality archaeology materials for the precollege classroom. Such materials respond to the growing interest among educators and students in including more archaeology in the precollege curriculum--in units, for example, focusing on prehistory, heritage studies, local history, Native Americans, and the environment. For all levels, from elementary through high school, this book can assist the precollege classroom teacher interested in introducing archaeology to young students.

Ruth O. Selig

ANTHROPOLOGY AS A CAREER

Anthropologists at Work: Careers Making a Difference. Produced by Dawn Bodo and Elizabeth Briody. VHS Color Video, 40 minutes. American Anthropological

Association and EXPOSE: Communication Network. Cost: \$25 (students and NAPA members), \$30 (professionals, non-NAPA members), \$35 (organizations, institutions). Make checks payable to American Anthropological Association, and send to: American Anthropological Association, Careers Video, 4350 North Fairfax Drive, Suite 640, Arlington, VA 22203-1621.

The National Association for the Practice of Anthropology and the American Anthropological Association have developed a video, *Anthropologists at Work: Careers Making a Difference*, which will help future anthropologists decide how to approach the field as a career. Since nearly one-third of new PhD anthropologists and the majority of new MA graduates now find employment outside of academia, this is a timely production.

Anthropologists at Work shows how anthropologists in all four subfields (ethnology, archaeology, physical anthropology, and linguistics) apply their skills to a wide variety of jobs, from the traditional academic research position to industrial anthropology, with a broad spectrum of careers between. The popular image of an anthropologist is usually an "Indiana Jones" character involved in adventurous and glamorous archaeological investigations, or a diary-keeper, studying small, nearly-extinct tribes in remote areas of the world. As NAPA notes in the press release, however, this video "captures anthropologists at home and abroad in diverse settings: from government and human services, to archaeological excavations and forensic work, to manufacturing industries; conducting research; implementing policy; teaching and providing expertise in the areas of health, education, development, and the corporate world."

The video focuses on four major points.

1) Skills developed as anthropologists, such as interviewing, statistical analysis, knowledge of foreign languages, writing, and problem solving, can be applied to almost any career. 2) There are professional opportunities in anthropology for women and minorities which may be unparalleled in any other field. 3) Anthropologists take a holistic approach to their careers, incorporating methods and theories from all four subfields. 4) It is extremely rewarding to apply one's anthropological background to improving other people's lives.

Case Studies

Anthropologists at Work presents about a dozen vignettes, interviewing anthropologists in all four subfields about their background, their jobs, and their impact on the world around them. For example, Cindy Mahrer, who is with the Center for Applied Linguistics in Washington, DC, discusses the effectiveness of a two-way bilingual education program. In this program, immigrant students are taught English, but the English-speaking students are also taught the immigrants' language. Neither group of students feels disadvantaged, and each group tends to help the other. All of the students benefit not only by learning a second language, but also by gaining insights into another culture.

Miguel Vasquez, an agricultural anthropologist from Northern Arizona University, works with the Hopi to restore abandoned terrace gardens. Traditionally, Hopis worked cooperatively on these gardens, providing a focus for socializing as well as producing food. As mass-produced products have become available, the Hopis have neglected the gardens, and the community focus has suffered. By researching the methods used by earlier generations and involving younger members of the tribe,

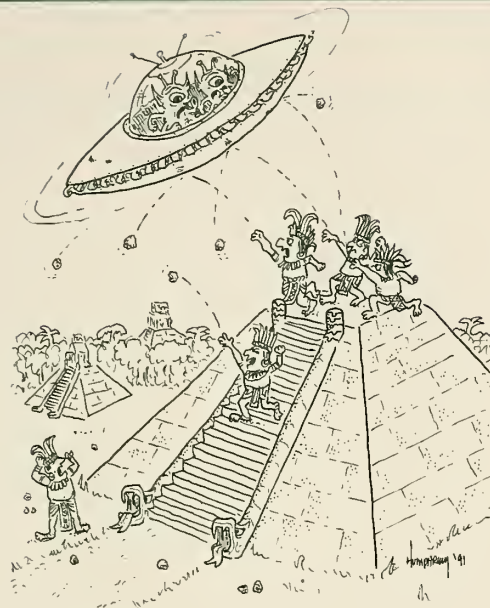
Vasquez has been able to help restore a part of the Hopi culture which might otherwise have been lost.

General Motors employs Elizabeth Briody as an industrial anthropologist. Briody analyzes the work culture at GM, finding where employee groups have problems and helping management to solve them. Michael Blakey, at Howard University, works closely with the community to help protect historical materials found in the African Burial Ground site in New York City, and to educate the public about the historical significance of the site. A Smithsonian Institution Curator, Douglas Ubelaker, uses his training as a skeletal biologist to work with law enforcement agencies to help identify human skeletal remains. By accumulating data from many cases, Ubelaker shows how an individual's lifestyle can affect his skeleton and teeth; this information, in turn, can be useful in future cases. Each of these vignettes, as well as the others not mentioned in this review, provides students and their advisors with specific information about how to apply the skills, methods, and theories of traditional anthropology to developing and implementing problem solving strategies in a wide variety of careers.

Marilyn London
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THE ETHNOGRAPHER - ADMINISTRATOR



MAYAQUEST: AN INTERACTIVE LEARNING EXPEDITION

In February 1995, the MayaQuest team, a group of four cyclists led by adventurer Dan Buettner, will embark upon a wholly kid-directed bicycle expedition into the Maya world of Guatemala, Mexico, Belize and Honduras. The goal of the three month expedition is to let kids and their teachers help unravel one of the greatest mysteries of all time: the collapse of the ancient Maya civilization. Archaeologists have long known that the Maya perfected the most complex writing system in the hemisphere, mastered mathematics and astrological calendars of astonishing accuracy, and built massive pyramids all over Central America. They had a complex system of government and were experts in farming the jungle environment. The expedition will provide a context for teaching about ancient civilizations, math, science, geography, art, architecture, and the links between the Maya and present day civilizations. Laptop computers and satellite equipment will link the cyclists to schools and homes where kids will interact daily with the team and Mayan specialists at archaeological sites.

From anywhere in the United States, students can use personal computers to interact with the team and actually help make decisions regarding everything from what the team should pack to which of a dozen prearranged research sites they should explore. These experts will count on kids for their library skills and their fresh insights into ancient mysteries.

Access to the team will be available through Classroom Prodigy; TIES of Minnesota and MECC will host a school based "MayaQuest Internet Center;" CNN Newsroom will feature weekly updates from the field. Regular MayaQuest updates will be available by calling toll-free 1-800-919-MAYA.

To receive a free curriculum guide, wall map and a resource list for tracking the expedition, send a self-addressed 9" x 12" envelope with \$1.24 postage to MayaQuest, 529 South 7th Street, Suite 310, Minneapolis, MN 55415.

Sponsors of the expedition include MECC, Prodigy Service, PentaPure water purifiers (WTC Industries, Inc.), Native "O" apparel, Target Stores, 3M Foundation, and Nystrom, Division of Herff Jones.

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Anthro Notes

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REPATRIATION: A CLASH OF WORLD VIEWS

[EDITOR'S NOTE: 'Repatriation' refers to the legislatively mandated return of human remains and specific categories of cultural items, currently housed in museums and other institutions, to culturally affiliated Native American groups. The point of returning materials in most instances is for purposes of reburial, though with regard to sacred items there is often an element of cultural revitalization involved. In this and the following two articles, Smithsonian anthropologists offer their perspectives on this increasingly important issue.]

Introduction

Repatriation is a topic of unparalleled importance in the museum world today, particularly as museum personnel struggle to meet deadlines imposed by law. There is also concern about the loss of museum collections. In addition to museums, repatriation is an issue of extreme importance for Native Americans, archaeologists, and physical anthropologists. In Indian country, there has been a ground swell of interest in and commitment to seeing the mandate for repatriation carried out. In the



WHO CONTROLS THE PAST ?

professional community, repatriation has had a profound impact on the way archaeologists 'do business' in the United States.

The idea of repatriation represents a highly charged issue where different currents of history, science, and politics converge. It is a point at which the interests of museums, Native peoples, archaeologists, and physical anthropologists intersect, where old relationships are being shattered and new ones forged. Repatriation has frequently been characterized as a clash of world views, the outcome of a head-on collision between diametrically opposed belief systems. It bears note that the two belief systems involved are not of equal valence within contemporary society. One system pertains to a subordinate minority group within the United States, the other to the majority. It took an act of Congress to move the scientific community to address the concerns raised by Native peoples.

For both Native people and non-Native scientists, human remains possess meaning. For many, if not all, Indian peoples, ancestral bones hold spiritual significance and power. For the scientist, skeletal remains are meaningful as sources of information: as 'data' for biomedical research, for studies of the evolution of human disease, and for solving forensic cases. For the physical anthropologist, human remains have been de-personalized and de-sanctified, though they are still highly meaningful. The fundamental differences in these two approaches to human skeletal remains relate to differences in world view and values systems.

Embedded within the repatriation movement are a number of fundamental issues that challenge our views of Native American peoples, call into question the "absolute" values of science, and force us to take a critical look at the role of museums in Western

society.

Repatriation may best be understood within the broader historical context of global decolonization. It parallels and is on a continuum with other indigenous movements around the world in which Native rights are being asserted. Among the issues being pressed are the right of control over one's own cultural heritage and the right to the sanctity of the grave.

In addition to human remains, the categories of cultural items encompassed within the repatriation mandate include funerary articles, sacred objects, and items of cultural patrimony. Legally, these items are defined as follows:

Funerary objects are items believed to have been intentionally placed with an individual at the time of death as part of a death rite or cultural ceremony.

Sacred objects are defined as specific ceremonial articles that are needed by traditional Native American religious leaders for the practice of traditional Native American religions.

Cultural Patrimony is defined as communally owned cultural property that has an on-going historical, traditional, or cultural importance central to a Native American group. Such objects, by definition, cannot be alienated, appropriated or conveyed by any individual, regardless of whether or not that person is a member of a Native American tribe or Native Hawaiian organization.

History of the Repatriation Movement in the U.S.

The idea of repatriation is rooted in the historical context of the civil rights movements

of the 1960s. During this period, Native Americans, like other minority groups within the United States, gained new-found political influence and recognition. It was during the activist climate of this era that some Native people began to express strong opposition to archaeological excavations, the public display of American Indian burials, and the permanent curation of Native American remains in museums.

The differential treatment of Native burials and the seeming disregard displayed by archaeologists toward them were seen as powerful symbols of oppression and the pervasiveness of racist practices for the Native community. In 1974, an activist group known as American Indians Against Desecration (AIAD) formed, with the explicit intent of bringing political pressure to bear on the question of the return and reburial of Native American remains. They argued that all Indians, past and present, are spiritually linked. As a result, modern Native peoples were responsible for the security of their ancestors' remains. They also argued that the removal and curation of human remains caused spiritual disturbance that could have a potential negative impact on the well-being of modern Native peoples.

Repatriation Legislation

Through the efforts of the AIAD and the widespread media attention it attracted, the repatriation issue slowly bubbled to the surface of public consciousness and eventually captured the attention of several sympathetic lawmakers. The first piece of legislation to treat this issue was the National Museum of the American Indian (NMAI) Act, which was passed by Congress in 1989. The principal functions of this Act were to authorize the transfer of the Heye Foundation's Museum of the American Indian collections from New

York to the Smithsonian Institution. This magnificent collection of Native American artifacts from all over the western hemisphere was to form the basis of the new National Museum of the American Indian. The NMAI Act also required the Smithsonian to inventory and assess the cultural origins of collections potentially affiliated with Native American and Native Hawaiian peoples. Human remains and funerary objects for which cultural affiliation could be established were to be offered for return to the appropriate tribal group. The idea that there must be a demonstrable relationship of cultural affiliation between the remains or objects in question and the tribal group to whom they would be offered for return was the cornerstone of this repatriation legislation.

The Native American Graves Protection and Repatriation Act (NAGPRA) was passed the following year, in 1990. This law expanded the repatriation mandate beyond human remains and funerary objects to include the categories of sacred objects and cultural patrimony. It also extended the applicability of this mandate to all federally funded museums, institutions, and agencies. The Smithsonian was explicitly exempted from NAGPRA due to the fact that it was already covered by the NMAI Act.

NAGPRA has four provisions:

1. To increase protection for Native American graves and provide for the disposition of cultural remains inadvertently discovered on tribal and federal lands;
2. To prohibit traffic in Native American human remains;
3. To require federal museums and institutions to inventory their collections of Native American human remains and funerary objects

within five years and repatriate them to culturally affiliated tribes upon request; and

4. To require museums to provide summaries of their collections of Native American sacred objects and cultural patrimony within three years and repatriate them if it is demonstrated that the museum does not have right of possession.

NAGPRA has been characterized as an important piece of human rights legislation for Native Americans. It also represents landmark legislation for museums in that it recognizes that scientific rights do not automatically take precedence over religious and cultural beliefs in the United States. NAGPRA has served to establish a new ethical outlook for museums in their relationships with Native peoples and other minority groups. It provides a framework within which museums and Native peoples can begin to develop new kinds of partnerships and collaborative relations. The passage of these laws represents the culmination of years of struggle for Native American groups. In essence, they legislate respect for the dead.

Issues in Repatriation

The central issue in the repatriation debate revolves around the question of whether Native American interests in reburial of ancestral skeletal remains take precedence over the interests of archaeologists and physical anthropologists in studying and preserving them. From the outset, repatriation was portrayed as a controversy between museums, archaeologists, and anthropologists on one side, and Native peoples on the other. Discussion between the various parties affected by the repatriation issue became very polarized and was often characterized as a debate between science and religion.

Portraying the repatriation issue in these terms had the effect of casting Native peoples as anti-science or anti-intellectual, playing upon and promoting stereotypes of Native peoples as "backwards" or "primitive." To escape this kind of simplistic analysis, it is more helpful to think of the controversy over repatriation as a clash between competing value systems rather than as one of science versus religion. This requires a recognition of the fact that science is legitimately subject to criticism on the level of values as well as facts. Anthropology and archaeology, and science in general, have their own agendas, their particular politics being a commitment to the story of progress.

To better understand the positions and world views of the protagonists in the repatriation debate, it is important to consider the arguments and issues from the different sides of the prism. From the perspective of Native Americans, the points at issue in repatriation revolve around the differential treatment of the dead, the lack of respect for Native beliefs and feelings, treatment of people as objects of study, and racism, as evidenced in disproportionate numbers of Native American remains given over to scientific study. From the professional community's point of view, the notion of repatriating collections for purposes of reburial is contrary to the most fundamental principles of preservation and conservation. The loss of collections is seen as an irreplaceable loss of data for scientific and educational purposes. The different issues embedded in these two world views are elaborated upon below.

Native Concerns:

1) Many museums, the popular media, and public school texts present stereotypes of Indian peoples as foreign and vanishing members of a different race, distinct and apart from the rest of us. The generally held belief

that Native cultures would become extinct in North America was one of the original justifications for the collecting practices of museums and the work of anthropologists in the 19th century. Reburial is an important political issue on the Indian rights agenda in part because, by asserting their rights to protect the sanctity of their ancestors, Indian people assert that they have not vanished, and that their beliefs and feelings are entitled to the same respect as other Americans;

2) Native Americans view the collections of Indian human remains housed in museums as disrespectful, racist, and colonialist. To many, the collecting of their ancestors' bones by museums is a source of pain and humiliation, the last stage of a conquest that had already robbed them of their lands and their way of life. They cite, as evidence, museums' institutionalized treatment of Native Americans as objects of natural history, in

which elements of their traditional lifeways are collected as specimens, and the remains of their ancestors are collected like fossils. Native peoples ask what knowledge has been produced through the study of these remains that is of value to them. They also want to know why museums need so many skeletal remains to study;

3) There is a question of differential respect for the sanctity of the grave. Native peoples ask why Euro-American burials that are accidentally exposed or uncovered are reburied elsewhere, while Native American burials are sent to museums or universities for further study. Indian arguments for the sanctity of the grave tend to be based on beliefs in the sacred nature of burials, and a concern for the spiritual well-being of the deceased. Their concept of ancestry is a communal one that compels respect for the dead even in the absence of direct familial



WHOSE CULTURAL HERITAGE ?

relations. The differences in attitudes between Euro-Americans and Native Americans may be seen to revolve around secular versus sacred constructs with respect to the sanctity of the grave and individual versus community responsibility to one's forebears; and

4) There is also the question of who controls the past; who has the right to interpret and write history. Native peoples have, for the most part, been denied the ability to interpret their own past. There has been a general refusal by scientists to admit to different ways of knowing, understanding, or interpreting the past. The past has been traditionally seen as the privileged domain of archaeologists. This is related to the elevation of Science as the supreme epistemology and the corresponding devaluation of other ways of 'knowing' the world, such as through oral history, legend, and myth. In the context of de-colonization, the past forms a critical locus in the struggle to reconstitute cultural identities and culture histories that have been severely impacted by the relentless drive and destructive policies of the State. The past forms the raw material for many and varied interests besides those of archaeologists, to be appropriated, preserved, exalted, or denied as required in the service of contemporary goals and motivations.

Museum/Scientific Concerns:

1) For many in the museum world, the notion of repatriating collections for purposes of reburial runs contrary to the most fundamental principles of preservation and conservation. It is viewed as tantamount to the purposeful destruction of knowledge. Museums are seen, by those who value them, as storehouses of data for future research. Physical anthropologists argue that the materials now in the collections provide information on the history and descent of the people represented;

new developments in the areas of DNA research, genetics, and chemical analysis in the past decade may hold the key to such questions as the peopling of the New World, human origins, and the evolution of disease;

2) Scholars also make the argument that archaeological finds in this country constitute the 'national heritage' and don't belong to one 'special interest group.' Since all humans are members of a single species, and ancient skeletons are the remnants of non-duplicable evolutionary events, all living and future peoples have a right to know about and study these human remains. That is, ancient human skeletons belong to everyone;

3) It was museums and anthropologists who were, in large part, responsible for the preservation of knowledge of Native American lifeways when Native cultures were on the wane or in the process of being systematically destroyed during the late 19th and early 20th centuries. Museum people note with no little irony that in cultural revitalization movements, Native peoples have often recovered information on their heritage and traditions from the very institutions they now oppose;

4) It has also been argued that it would be racist *not* to have collections of aboriginal remains in New World museums. Such a situation would imply a lack of interest in the history of Native peoples of this continent.

Positive Outcomes of Repatriation

While the passage of the recent legislation provides a partial answer to the question of 'Where do we go from here?' the laws do not fully settle the issues. The murky language employed by the authors of the federal Acts leaves a number of technical and philosophical questions unreconciled.

These may prove to be intractable unless we are able to understand the repatriation issue within the broader sociopolitical and historical context of global de-colonization. What we're witnessing with the repatriation movement is a struggle for self-determination and control over cultural heritage. This struggle represents an effort on the part of indigenous peoples to reconstitute a collective cultural identity, in the aftermath of colonialism.

While having a direct and profound impact on Native communities in this country, repatriation also can be construed as a step in the right direction toward improving relations among Native peoples, anthropologists, and museums. Repatriation legislation provides a framework within which to develop better lines of communication and foster greater understanding and dialogue between the different parties affected. The change in attitudes and values developing out of encounters based on the repatriation mandate has begun to lay a foundation for museums, anthropologists, and Native peoples to work together in a spirit of mutual cooperation and collaboration.

Repatriation Process at the National Museum of Natural History

The Smithsonian Institution's physical anthropology division in the National Museum of Natural History (NMNH) houses about 28,500 sets of skeletal remains. At one time, Native American remains numbered approximately 17,600 individuals; the remainder of the collection is made up of Euro- and African-Americans, and Europeans, Africans, and Asian peoples from various parts of the world. These collections were developed during the first half of this century, through the efforts of the Smithsonian Institution's first physical anthropologist, Aleš Hrdlička.

The repatriation mandate requires the Smithsonian to inventory and assess the cultural origins of collections potentially affiliated with contemporary Native American and Native Hawaiian peoples. Affected tribal groups are to be notified of the Museum's findings and consulted with regard to the disposition of culturally affiliated remains or objects. The Museum facilitates the return of the materials in question upon the request of the affiliated tribal group.

One of most sensitive collections in the NMNH is the Army Medical Museum collection of skeletal remains, which were transferred to the Smithsonian around the turn of the century. This collection contains about 2300 sets of remains, many of which date to historic periods and are explicitly identified with regard to cultural origins. The Army Medical Museum was founded in 1862 to perform biomedical and pathological studies on the Civil War dead. At the close of this War, the emphasis of the Army Medical Museum shifted to the collection of Native American skeletal remains. With the outbreaks of the Spanish-American War and World War I, research funding was diverted away from the museum, and its collecting function ceased.

The repatriation legislation offers little in the way of technical guidelines for how to proceed with this effort. It was thus left to the Museum to set up a workable program, which involved the establishment of a formal Repatriation Office. To date, much attention has been focused on the historical remains, with the Army Medical Museum collections being the most sensitive. Museum personnel continue to work through these collections, documenting specific information relevant to cultural identification from each set of remains.

In addition to responding to requests, the NMNH also takes a pro-active approach to the

inventory process. Groups that have not contacted the Smithsonian Institution are notified if collections of potential interest to them are identified during the inventory process. In addition to the documentation of physical remains, the Repatriation Office of the NMNH is also producing summaries of the ethnographic collections.

From a core staff of four in September 1991, the office has grown to include 20 regular staff and six full-time contractors. The Museum has sponsored eleven Native American professionals, students, and interns to date, one of whom is now a permanent member of the staff. The office currently has about 35 formal repatriation requests on file. These are handled on a first come, first served basis. Fifteen separate repatriations have been completed to date by the NMNH, and twelve others are in progress.

Outreach

In addition to the inventory and documentation work of the Repatriation Office, outreach efforts to the Native American community are a high priority. Repatriation staff have travelled to the Pacific Northwest, the northern Plains, Oklahoma, the Southeast, the Southwest, and Alaska to meet with leaders of different tribal groups. The purpose of these visits is to provide information on the repatriation program at the NMNH and collections of potential interest to the tribes. Staff members have participated in a number of the regional consultations held by the National Museum of the American Indian in various parts of the country as well.

A standing committee made up of five independent, external individuals is in place to review any disputed cases. Three of the members of this committee were elected by the Native American community. To date, there

have been no disputes for the committee to arbitrate.

It is important to remember that there is no Pan-Indian religion or single viewpoint on how to deal with the dead. Cultural protocols vary by tribe. Some Native groups feel that the housing of the dead in museums threatens the spiritual harmony and balance of the world; many say they personally feel the spiritual disquiet of their ancestors who are stored in museums. Another viewpoint is held by the Zuñi tribe, which does not want skeletal remains returned to the Zuñi reservation at this time. They feel the remains have been desecrated, and there is no method of dealing with them in any traditional Zuñi way. The Zuñis avoid the disturbance of grave sites when possible, but when a burial must be exposed (due to construction, for instance), the remains are excavated by an archaeologist, and basic information about the individual is determined by a physical anthropologist. The remains, along with all grave goods, are then reburied out of harm's way, as close to the original burial as possible.

The returns conducted to date have varied. The procedures have ranged from museum personnel boxing and shipping remains, to private ceremonies held in the museum by tribal representatives, to very public ceremonies. An example of a particularly interesting case study from the Northwest is discussed below.

Tamara L. Bray
Repatriation Office
Smithsonian Institution
Museum of Natural History

A REPATRIATION CASE STUDY

In December of 1994, The National Museum of Natural History (NMNH) of the Smithsonian Institution returned a large collection of human remains and associated funerary objects from the Middle Columbia River Basin to the Confederated Tribes of the Warm Springs Reservation of Oregon and the Yakama Indian Nation of Washington State. The Smithsonian had been involved in negotiations for the return of these collections since 1988, when Chief Nelson Wallulatum of the Warm Springs Reservation first formally petitioned the Museum.

The majority of this collection was recovered by Dr. Herbert Krieger of the Smithsonian Institution in 1934 from Lower Memaloose Island, during an archaeological salvage operation associated with the construction of the Bonneville Dam on the Columbia River. A total of 51 sets of human skeletal remains and 164 lots of archaeological objects were recovered from a mixed, multiple burial context on this island. The artifacts found in association with the skeletal remains indicate that the burials dated from the late 1700s through the 1870s. Another fourteen sets of remains acquired by the Museum in 1903 were recovered from a similar context on Upper Memaloose Island, located upstream from The Dalles, Oregon. Native peoples of the region traditionally buried their dead in above-ground burial houses on islands in the Columbia River. These islands are generically referred to as 'memaloose islands,' meaning 'islands of the dead' in the native Chinookan language.

Most of the Native people who lived along the Columbia River were removed to reservations in the mid-nineteenth century. Those on the north bank were assigned to the Yakama Reservation, while those on the south side became part of the Confederated Tribes of the

Warm Springs Reservation. In August 1993, the NMNH recommended that the Columbia River collections be returned. The decision was made in accordance with the National Museum of the American Indian Act, which requires the Smithsonian to repatriate, when requested, culturally identifiable human remains and funerary objects. Given that the remains from the Columbia River islands were equally likely to be affiliated with descendent populations which are now part of the Yakama Indian Nation as those who are now members of the Confederated Tribes of the Warm Springs Reservation, both groups had to be involved in decisions about the disposition of the collections.

Delegates from both tribes arrived in Washington, DC to prepare the remains for return, a process which took two days. During ceremonies held at the Museum, Chief Wallulatum stated that he viewed the individuals who had been housed in the Museum as warriors who had been held hostage in the name of Science, but who were now being returned to their homeland. The collections were shipped to The Dalles, Oregon, where they were ceremonially reburied.

Documentation

Documentation of the remains and associated funerary objects recovered from the Upper and Lower Memaloose Islands and adjacent sectors of the Middle Columbia River Basin in Oregon and Washington began in June 1992. This process was initiated in response to a request from the Confederated Tribes of the Warm Springs Reservation for the return of any culturally affiliated remains from Lower Memaloose Island and the tribe's ceded lands. In addition to the Confederated Tribes of the Warm Springs Reservation, the other Native American community potentially affected by

the findings of the Repatriation Office report were the Confederated Tribes of the Yakama Indian Nation.

A total of 72 catalogue entries in the Physical Anthropology division of the NMNH were identified as having come from the Middle Columbia River Basin. Fifty-one of the catalogued sets of remains were recovered by Smithsonian curator Herbert Krieger during excavations conducted on Lower Memaloose Island in 1934. A single skull in a separate museum accession, collected by a different person 65 years earlier, was also determined to have come from Lower Memaloose Island. Fourteen crania, each with its own catalogue entry, were obtained from Upper Memaloose Island by the Fred Harvey Company and sold to the National Museum in 1903. Another set of remains located in 1948 by the River Basin Survey project comes from an interior site in Crook County, Oregon. The remaining five catalogue entries consist of crania from the Middle Columbia River Basin that were collected during the nineteenth century, and initially sent to the Army Medical Museum. The provenience information on these remains is imprecise. Three of the skulls were recovered near the Cascades of the Columbia River; one was collected upstream from The Dalles on the south bank of the Columbia River; and one was recovered by the Wilkes Expedition in the mid-nineteenth century, somewhere along the Columbia River. In compliance with the National Museum of the American Indian Act, these 72 sets of human remains were evaluated in terms of their probable cultural affiliation.

Cultural History of the Area

The mid-Columbia River region, particularly in the vicinity of The Dalles, was a cultural crossroads where groups from two distinct cultural areas, the Northwest Coast and the

Plateau, converged. Native peoples living in this area at the time of contact included the Wasco, Wishram, White Salmon, and Watlala (Cascades), Upper Chinookan groups affiliated with the Northwest Coast tradition; and the Klickitat, Tenino, and Yakama, Sahaptin speakers associated with the Plateau culture area. The treaty agreements signed with the U.S. government in 1855 established two separate reservations in the region on either side of the Columbia River. As a result, village groups living on the north side of the middle Columbia, including both Upper Chinookan and Sahaptin-speaking peoples, became affiliated with the Yakama Reservation, while those living on the south side moved to the Warm Springs Reservation.

The human remains from both Upper and Lower Memaloose Islands were recovered from mixed, multiple burial contexts. These mixed deposits can be ascribed to traditional mortuary practices in the region, involving the use of above-ground charnel houses. Associated funerary objects from the ossuary on Lower Memaloose indicate that the island was in use as a mortuary facility from at least the late eighteenth century through the mid-nineteenth century. The artifactual evidence is corroborated by early ethnohistoric accounts and oral tradition. Though lacking associated funerary offerings, the remains from Upper Memaloose Island are assumed to date from the same general proto-historic/early historic time period, based on fortuitous association of a few historic objects and the condition of the crania.

Based on the ethnohistoric and ethnographic information available on aboriginal village locations, the mortuary practices indicated by the context in which the remains were found, the presence of quantities of historic artifacts, and the number of crania in the series exhibiting intentional modification (a practice



associated with the Upper Chinook), it is suggested that the remains from Lower Memaloose Island (52 individuals) were culturally affiliated with the White Salmon, Wishram, and/or Wasco bands of the Upper Chinook. Accordingly, it was recommended that both the Confederated Tribes of the Warm Springs Reservation and the Yakama Nation, the Native American entities under which these bands are now subsumed, be notified about the presence of these remains in the NMNH, and consulted about their wishes regarding their disposition.

Analysis of Materials

The archaeological assemblage from Lower Memaloose included a large collection of personal and domestic artifacts, such as buttons, glass and shell beads, and metal utensils. The collections encompassed a total of 164 archaeology catalogue numbers in the Museum collections. Based on the context of recovery, the items in this assemblage were

interpreted as associated funerary objects and, as such, were subject to repatriation under the NMAI Act. Consequently, it was recommended that these items be offered for return together with the human remains.

Fifty complete crania were recovered from the skeletal remains. Of these, thirty were adult males aged 25 to 65, and eighteen were adult females, aged 18 to 55. Age and sex were undetermined for two of the crania. With respect to the mortuary population from Upper Memaloose Island, fewer of the individuals (about 65%) have intentionally modified (flattened) heads. Given this culturally mixed population, together with the fact that Upper Memaloose Island was located at the outer limits of Upper Chinookan influence, it seems not unlikely that both Upper Chinookan and Sahaptin-speaking peoples utilized this island for burial purposes. Applying the same criteria as listed above for the Lower Memaloose assemblage, it was suggested that the 14 sets of remains from Upper Memaloose were likely affiliated with

either the Wishram (for whom the island was formally set aside as a cemetery in 1926), the Wasco, or the local Tenino. As in the case above, it was recommended that both the Confederated Tribes of the Warm Springs Reservation and the Yakama Nation be consulted about their wishes regarding the disposition of the remains. No funerary items were associated with the human remains from Upper Memaloose Island.

Of the three crania recovered in the vicinity of the Cascades, two were identified as Watlala, while the other was identified as a probable member of the Klickitat or Yakama tribe. The remaining two individuals from the middle Columbia River lack secure provenience information. One of these exhibits the type of intentional cranial modification associated with the Upper Chinookan groups, while the other cranium is unmodified. There were no funerary objects associated with any of these remains. Given the presence of cranial re-shaping and the available provenience information, it was recommended that the Warm Springs Confederated Tribes be consulted regarding the disposition of three of these individuals (those with cranial flattening), and that the Yakama Nation should be consulted on a fourth. The cultural affiliation of the remaining individual is unknown.

The final set of human remains in this inventory was recovered by the River Basin Survey archaeological salvage project in the Prineville Reservoir basin in central Oregon. Evidence of a bullet wound to the head suggests the probable cause of death and dates the burial to the historic period. The cranium also exhibits intentional modification of the type associated with the Upper Chinookan populations. Given that the cultural affiliation of the individual cannot be specified beyond the level of Upper Chinook, it was

recommended that both the Confederated Tribes of the Warm Springs Reservation and the Yakama Nation be consulted as to their wishes regarding the disposition of the remains.

Tamara L. Bray

About Tamara Bray

Tamara Bray received her doctoral degree in anthropology from the State University of New York at Binghamton in 1991, and has been with the National Museum of Natural History's Repatriation Office since its inception in that same year. During this time, she has worked with Native American groups from the Pacific Northwest, the Great Basin, and the Great Lakes region on specific repatriation requests. She has travelled around the country to meet with tribal leaders and discuss the NMNH Repatriation program, participated in regional consultations sponsored by the National Museum of the American Indian, and presented professional papers at several national anthropological conferences on the subject of repatriation. From Tamara's perspective, the challenge of her position has been in walking the fine line between scientific interests and Native American rights, applying archaeological knowledge to address contemporary concerns, and helping to establish policies that have potentially far-reaching effects on American archaeology. The substance of her work in the National Museum has recently been published by the Smithsonian Institution Press in an edited volume entitled *Reckoning with the Dead*.

REPATRIATION AS A GUIDING PRINCIPLE FOR THE ARCTIC STUDIES CENTER

The passage in 1990 of the Native American Graves Protection and Repatriation Act (NAGPRA) emerged from the same social and political climate that now finds museums throughout the United States reconsidering their roles vis-à-vis Native Americans. Coincidentally, many Native communities are experiencing a burgeoning awareness of their cultural heritage, evidenced by the construction of local and regional cultural centers and by the growth of initiatives like Keepers of the Treasure, an organization of Native Americans concerned with the preservation of their physical patrimony.

In the North, many Native villages still retain a strong community identity. This identity is often based on the continuance of traditional hunting and fishing subsistence economies. It is also reflected in an ideology that includes a special reverence for elders who retain their cultures' traditional ecological knowledge and spiritual reverence for the land and animals on whom life depends. These shared sentiments are leading communities throughout Alaska to develop their own cultural preservation programs, initiatives that include an appreciation of 19th-century material culture, much of which now resides in museums throughout the world.

The Arctic Studies Center (ASC), located in the Anthropology Department at the National Museum of Natural History, was created in 1988. The program embraces the tripartite mandate of the Smithsonian's contributions to knowledge through research, exhibition and educational outreach programs. All three of these agendas are realized by the ASC commitment to "community anthropology,"

which seeks to combine the knowledge and experience of ASC personnel with objects in the Smithsonian's collections and Native community interests and expertise. This program is a logical extension of Smithsonian commitment to Arctic and subarctic peoples that uses the materials in the national collection to celebrate the accomplishments of those Native peoples. The concept of repatriation, which encompasses the return of knowledge and awareness of objects in museum collections to Native communities from which they derive, seeks common ground between Native Americans and museums holding title to large ethnographic collections. An example from Labrador and one from Alaska illustrate this broad interpretation of the repatriation concept.

Pathways

The Smithsonian has a long and distinguished history of involvement with the Native peoples of Labrador, including the Innu. In April 1992, the Innu Nation, the Labrador Community College in Northwest River, and the Innu Resource Center invited the author to the community of Sheshatshit in Labrador to discuss the Smithsonian Institution's collections and photographs that pertain to Innu culture and history. These dialogues raised the possibility of initiating a program that focused on cultural heritage, previous Innu land use, and archaeology. The proposed program was seen as an opportunity to teach Innu students about archaeology. With the expansion of Innu territorial authority and land management responsibilities emerging as part of proposed land claim negotiations, the Native people recognized the need for trained Innu individuals to assist in management of historical resources. The Innu and the Arctic Studies Center developed an archaeological research project which could provide new educational opportunities for the Innu.



Funds for a six-week field course in archaeological method and theory was acquired through "Pathways," a training program supported by the province of Newfoundland-Labrador. The course provided Innu students with the skills to work as technicians and crew members on archaeological research projects and gave them an introduction to cultural resource management programs and philosophy.

Community involvement was an essential feature of the Pathway program. An integral feature was the recognition of the importance of the skills, knowledge and memories of Innu elders, who were invited to the classroom.

The science of archaeology is a Western method of constructing knowledge about the past. The course was designed to include both the Western "scientific" discipline and the wisdom and knowledge of the Innu, based on traditional practices, observations, myth, and memory. After ten days in the classroom, the students spent nearly a month working at a site. Excavation revealed the remains of old tepee structures with central hearths. A wide array of late 19th and early 20th century artifacts, including hunting and fishing paraphernalia, tobacco-related products, knives, cookware, medicinal containers, molasses jugs, combs, beads, and coins, was recovered. The final phase of the program

was a presentation to the community on the results of the project. The Pathway participants spent a week cataloging and conserving the excavated objects, and preparing an exhibition and open-house for the community. Not only did the Pathway project represent an exciting development in archaeological research in Labrador, it provided a way for young Native people to work closely with community elders, and instilled pride by revealing a rich, exciting history that is their legacy. For the Arctic Studies Center, Pathways provided a model of collaboration between Native people and Smithsonian archaeologists.

Smithsonian Ethnographic Collections

Much of the material collected by Smithsonian ethnographers in the waning decades of the 19th-century consists of the day-to-day objects used for domestic and subsistence activities: clothing, hunting tools, sewing kits, dolls, etc. Edward Nelson, a naturalist and collector for the Smithsonian Institution, travelled among the Yupik of western Alaska between 1877 and 1881; his Yupik name was translated as the "Man who collected good-for-nothing things." His visits to Yupik communities were eagerly anticipated, as he brought sought-after trade items to exchange for objects people no longer needed or used. These "good-for-nothing things," the "trash" of Nelson's day, have been transformed by the alchemy of time and the miracle of preservation into modern "treasures." The Smithsonian's 1982 "Inua" exhibition celebrated Nelson's extraordinary collections. This exhibit made an international tour, after which a smaller version travelled in recent years to communities in rural Alaska. "Inua" brought recognition of the diversity and imagination of Yupik artistic traditions to a new generation of Alaskan artisans. In turn, many objects from "Inua" and other travelling

exhibits have now become recurring motifs in today's Alaskan commercial art.

Skeletal Materials

Repatriation often involves skeletal materials from museum collections. In Alaska, large numbers of skeletal remains were collected during the 1920s and 1930s by Aleš Hrdlička, a physical anthropology curator from the Smithsonian. Hrdlička was trained as a medical doctor, but his true passion was the systematic study of human physical variation. He collected and studied skeletal materials (mostly skulls) from all over the world, carefully taking measurements and noting morphological characteristics on each set of remains. To Hrdlička, these materials represented a research population that could provide answers to many questions about human antiquity in the New World, variation in physical appearance between populations, health and morbidity, growth and development -- the list is endless. He also felt, as did others of his generation, that Native Americans were dying out, and that he was protecting their heritage by collecting and storing the skeletal materials in a museum.

Although we now recognize that Hrdlička's collecting techniques would not meet either the scientific or ethical standards of today, we also realize that his contributions to the understanding of human variation are the foundation of modern physical anthropology. The techniques he developed and the standards he established provided guidelines that are still in use today, half a century after his death. The materials collected by Hrdlička from Alaska and elsewhere have been used to help establish cultural continuity at archaeological sites; to assess diet, health and stress of early peoples; to provide clues to human migration patterns and ethnic identity; to provide

information on growth and development; to document pathological conditions affecting populations; and to provide a basis for comparison in forensic cases. Many of these studies have directly benefited the Native people of Alaska, by providing them with information about the daily lives of their ancestors, by helping to establish their legal status, and by confirming their heritage and cultural identity. Some of the Alaskan skeletal material from the Smithsonian collections has been repatriated, but Hrdlička's initial measurements and documentation of morphological traits still exists for future research.

Conclusion

Indigenous peoples worldwide have begun to challenge the political and economic forces confronting them. Across the Circumpolar North, Native people are gaining the political authority and economic independence to increasingly effect public policy and development. With autonomy and authority comes a concurrent expression of interest in the revitalization of culturally distinct arts, rituals and ceremonies. These developments, not just in the North but world-wide, pose the great challenge to museums in the next century: to evolve from the perceived giant repositories of scientific specimens derived from colonial excesses and anthropological noblesse into institutions which facilitate an awareness of multiethnic diversity through celebration, repatriation and revitalization.

Stephen Loring
Arctic Studies Center

For Further Reading on Repatriation

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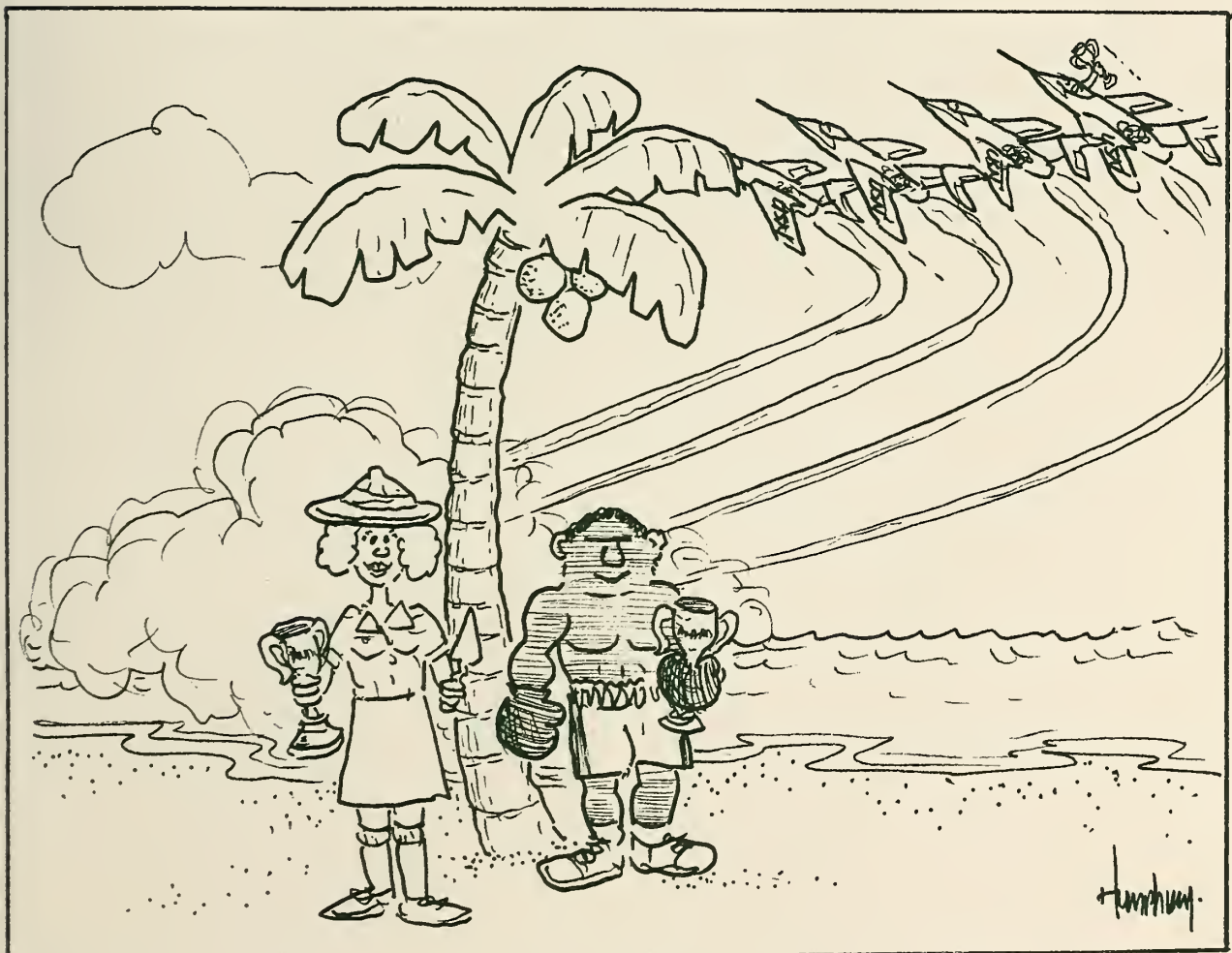
PUTTING PENSACOLA ON THE MAP!

"Archaeotourism" in West Florida

In March 1995 the first annual "Pensacola Pride" awards were presented to local people and organizations who have "put Pensacola on the map," by gaining national recognition in their chosen professions. The local press gave the awards and featured the awardees' work in the local and regional media. Three recipients received premier awards: the well known U.S. Navy fighter jet demonstration team known as the "Blue Angels"; the local world champion welter weight boxer, Roy Jones, Jr.; and

archaeologist Dr. Judy Bense and the Archaeology Institute at the University of West Florida.

Strange company for an archaeologist? Not in Pensacola. Here, archaeology plays a leading role: mainstreamed, shared, put on exhibit, and studied by University academics and students. The "Pensacola Pride" award is only the most recent of several local, state, and national awards given to University of West Florida archaeologists, the University, and their sponsors. Such awards come in appreciation for "putting Pensacola on the map," and for highlighting the archaeological resources of this quiet southern coastal city of a quarter million people.



Archaeology Comes to Pensacola

It all began in 1984 when the University decided to initiate an Anthropology program where there had been none. I arrived in Pensacola and quickly realized that the high quality archaeology I had studied academically was one of the best kept secrets around. In addition, the fact that it was unknown was directly leading to the destruction of the archaeological record right before my eyes!

Everywhere I looked, local archaeological deposits were under siege. Urban renewal was tearing up the historic colonial part of downtown; building construction along the bay front was threatening multiple sites; urban sprawl in subdivisions and strip centers was damaging interior prehistoric Indian sites; and massive construction at the U.S. Naval Air Station was impacting the densely concentrated sites on the peninsula. Responsible community leaders with the best of intentions had planned these projects, supported by both public and private funds. With little awareness of their rich heritage or their unknown and unrecognized resources, the community was rapidly destroying the unwritten record of all previous Pensacolans.

For a while I looked the other way. After all, I was new to town and a prehistoric archaeologist, unqualified to deal with historic period materials and documents. I was in the middle of starting a traditional career around the prehistoric Indian cultures that had left a rich record in sites still well preserved in the woods and swamps, away from the massive destruction of the urban areas. I was alone -- no staff, no funds, no graduate students -- and I had no clue about local politics or business.

Call to Action

However, one Sunday afternoon that first year, as I looked out over the construction site of the new city hall and watched looting being treated as a respectable pastime for families and relic collectors alike, it simply became too much to bear. I realized that day that since I had come to live in Pensacola, it was my responsibility to find a way to stop the destruction of the archaeology in *my* town. Because of my professional training and position at the University, the archaeological sites here were, in a sense, under my care; it was *my watch*, and I would not have my legacy be that I was the only archaeologist in town, and I had let it all be destroyed.

The Gulf Power Company

My first opportunity to champion public archaeology in the Pensacola area involved the electric utility for West Florida, the Gulf Power Company. In 1984 this company was planning to build a \$25 million corporate headquarters on the bay front of Pensacola. The proposed location was archaeologically sensitive, as it had been an African-American neighborhood for 150 years. It was in the vicinity of a colonial governor's villa, and a few prehistoric sherds had been recovered over the years. A check with the State determined that there was no archaeological compliance required for the project.

With a small delegation of concerned students and professionals, we approached the company with an unsolicited proposal to test the 11-acre parcel to determine whether there were significant archaeological deposits present. The testing was allowed, and we identified two

significant archaeological sites: a sealed, single Early Woodland village with scores of pits, and the undisturbed deposits of the entire African-American neighborhood.

We realized quickly that the scientific value of the sites was important, but not particularly so to the utility. We also knew that the company had been receiving negative publicity concerning the construction of its corporate headquarters due to its excessive cost, the relocation of poor African-American residents, and the lack of any direct improvement in service. So, we decided to develop a second proposal to the company, this time offering to use the company's archaeological resources for a positive public relations project focused on a major community outreach effort. The company would make a high profile educational contribution to the community, including an archaeology teaching unit for the public schools that would include a video documentary, a slide-tape documentary, replicated artifacts and a coloring book. An accessible public exhibit focusing on local Pensacola archaeology would be constructed for the lobby of the company building. We designed a logo for use on coffee cups, tee shirts, and power bill inserts, and we created a catchy project name, "Hawkshaw," after the name of the African-American neighborhood that would be virtually eliminated by the project.

The proposal was funded immediately by Gulf Power Company. As a result of the project, the company won a national Public Service Award from the Secretary of the Interior, as well as the top State public relations award. Archaeology gave the company what nothing else could: reams of positive newspaper coverage, TV spots, and editorials all over the Southeast. Through archaeology Gulf Power did something good for the community and for science, and the company was proud of the

extent of its commitment to community improvement. Today, Hawkshaw symbolizes the living past that would have been forgotten and destroyed if Gulf Power had not preserved the past as it built for the future.

Taking On the City Council

In order to stop the destruction of sites in the city, we needed local political support for archaeological preservation, and for that we needed legislation to protect local archaeological sites. For the City Council, any vote comes down to voter/citizen support. We helped form a large and vocal political action committee, and when we sent a proposal to the City Council for an archaeological review procedure on city owned property, it was approved unanimously. Council Members enthusiastically endorsed a program that put them in the leadership role, with funding for compliance on a project-by-project basis. Since the review procedure approval, four major city compliance projects have located and preserved significant archaeological deposits, with consistent and positive media coverage. A survey of Pensacola has been completed, with its archaeological areas defined and documented.

The Colonial Trail

Pensacola was a colonial town, one of the handful of settlements in the United States that has been continuously occupied since the 1600s. In the fall of 1994, the Pensacola Colonial Archaeological Trail was opened in the historic part of downtown. The trail is a series of outdoor and indoor public exhibits of some remnants of Pensacola's colonial town that existed from 1750 to 1821, a town that lies just beneath our streets, sidewalks, parking lots, and buildings. In an outside walking tour, people can see the actual archaeological remains of their old town: wells, foundations

of buildings, cooking ovens, and fort walls. The outdoor archaeological features are all well marked with signs and there are free brochures to take along the trail. People visit the museum and view larger exhibits of the items used in their town over two centuries ago.

"Archaeotourism" is bringing new people from the beaches to places downtown, where they eat, make purchases, and often stay the night. A new maritime museum and exhibit are being designed to display the items from the spectacular 16th century galleon shipwreck currently under excavation in Pensacola Bay, as well as more recent material from our long maritime history.

The Trail is a high profile, public oriented project that includes various elements for the public, from volunteer opportunities to school field trips. A full time public interpreter and public relations staff member prepares a weekly newsletter, takes groups on tours of dig sites, and even occasionally helps with excavations. The project is so popular with the press that it made international news and was highlighted on the "Science and Technology" program of Cable News Network.

Archaeology Steering Committee

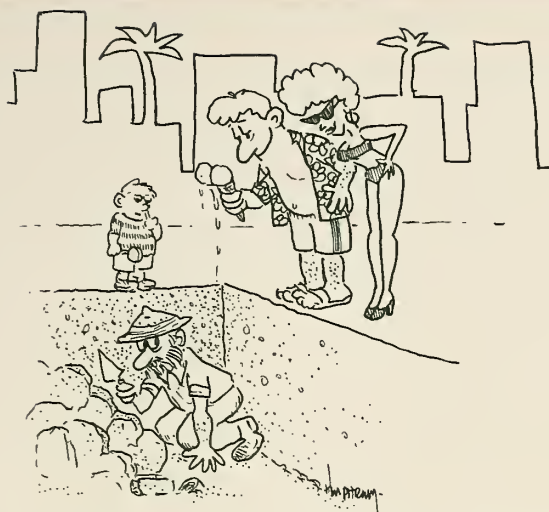
Pensacola now has an Archaeology Steering Committee, headed by a bank executive, made up of business men and women and community leaders interested in incorporating archaeology into the economic growth and development of the area. While the committee is advised by local archaeologists, historic preservationists, and the University President, it independently generates archaeological development ideas and ways to fund their implementation. The committee members know that the public likes history and

archaeology; they believe that physical and significant resources that lie in their area, if properly identified, studied and interpreted, will draw tourists and their money. It is a "clean" resource to develop. The concept of "archaeotourism" generated the ideas for the archaeological trail, archaeology museums, and sponsorship of public archaeology projects and products. This committee is even finding a way to increase the archaeology at the University, with more faculty and student support through political support in the state legislature. After all, the University is the "home" of archaeology in this community, and a necessary part of the development of the archaeology here.

Funding Support

In the Fall of 1993, Dr. Margaret J. Smith, a retired Pensacola aeronautical engineer and statistician passed away. She left her entire estate -- almost half a million dollars -- to the archaeology program at the University of West Florida. A few years earlier, the recently retired Dr. Smith had walked into my office and asked how she could become involved in archaeology. Not only did she take almost all of our courses to become educated in the subject, she brought our entire archaeology staff and students into the modern age of PC computer assisted drawing (CAD) and data analysis. Under her tutelage, we moved to a new level of work quality. With her gift, she continues to help us as we build, grow and develop archaeology at the University.

At the same time another guardian angel, a retired business couple, Hal and Pat Marcus, gave \$100,000 to an endowment for the Historical Archaeology graduate program at the University of West Florida. They selected archaeology because the field trains professionals who will develop Pensacola's archaeological resources that will, in turn, be



economically beneficial to the community. The program had no steady graduate student support and our donors knew that their gift would attract good students competing for graduate assistantships.

Pensacola Today

Today, there is a large archaeology support group, an advisory archaeology steering committee, an archaeological ordinance in the city, and a civic commitment to an archaeology integrated into the growth and development of Pensacola. In Pensacola, archaeology is viewed as an economic resource, not an economic obstacle. We communicate to the public in many ways a very simple message: **archaeology is here and it is good.** We have used the media's natural interest in archaeological finds, the public's natural curiosity about archaeology, and the good sites which are in our midst. The principle and assumption underlying all our efforts can be summed up in a single phrase: valuable resources will be protected by the public and their representatives. In Florida, our natural resources such as beaches and recreational waterways are protected and our cultural resources such as roads are well kept. These are expensive activities, but, because these resources are important economically, residents are willing to maintain them.

Archaeological sites have been demonstrated to be economically important in many places such as Jamestown, St. Augustine, the Southwest and Europe. Why not Pensacola?

The community is well on its way to understanding the benefits of the archaeological resources that lie in their midst. While there is a long way to go, and sites are still being destroyed, the damage is much less, and more and more people want to protect them. There still are only a few archaeologists here, three to be exact, and we will never, personally, be able to take care of all the sites. But the residents can and will, if given proper incentives.

Pensacola is not an unusual town, archaeologically. Each town in the country has something special about it and there are archaeological sites in and around each of them. Look around your area and ask if there are ways to stem the destruction going on in your own back yard. It will make you and your community feel good. After all, our communities' resources belong to us; **it is our watch.**

Judith A. Bense
Professor of Archaeology
University of West Florida

TEACHER'S CORNER: BINATIONAL RESEARCH AND TRAINING

"Team research with a Mexican counterpart...not only gives you the insight of a Mexican studying Mexican culture, but it also aids you in knowing what kinds of questions to ask, when to ask, how to ask, what is appropriate in terms of that culture. It greatly enhances your learning experience and hopefully friendships made...will continue."

Kristina Lang-Dei, student

Over the last decade, the University of California, Santa Barbara (UCSB) and the Autonomous University of Querétaro, Mexico (UAQ) have developed an innovative research and training project that can serve as a model for others to follow. From its modest beginnings as an anthropology field research project, the Querétaro Research Project (QRP) has grown into a variety of opportunities for students and faculty from several social science disciplines at both universities.

The strength of the QRP lies in its binational collaboration. Whether in the field or in the classroom, the experience of Mexican and United States students living and working together teaches these young people the benefits of collaboration and communication across international and cultural borders. It also establishes the interpersonal basis for long term professional ties among Mexican and U.S. participants.

The Project's Research Focus

The Querétaro Research Project is an innovative team effort involving undergraduate and graduate students, faculty and researchers from both UCSB and UAQ. Participants work independently or jointly, but all share a framework of macro-micro analysis of interrelationships between individuals, extended social and political networks, communities, and larger social, economic, and political structures. Team members meet regularly to discuss their research with other participants and to co-author papers for conferences and publication.

The main goal of the team research component of the QRP is to study the impact of transnational ties, state policies, and the use of natural resources such as land and water on the Mexican peasant communities in the state of Querétaro. The historical period being researched begins with the 1917 post-Revolutionary land reform program in Querétaro and continues to the present. Research covers the entire state of Querétaro and its contrasting agricultural and ecological zones, while focusing on specific communities and land tenure sectors in each zone, including *pequeños propietarios* (private farmers), *ejidatarios* (state land grant recipients), and *jornaleros* (hired farm workers). Collectively, the studies contribute to a comprehensive ethnographic portrait of how a single region in Mexico has changed, adapted to, and been affected by local, regional, national, and international dynamics and structures over nearly a century. Research projects have covered such topics as female migration and employment, traditional medical practices, the impact of transnational corporations on health care decisions and farming practices, and political participation by the inhabitants of Querétaro.

Participants are encouraged to present the results of their research in professional journals and conferences in both Mexico and the United States. One of the main advantages of the team approach is the mentorship provided by faculty of both universities for graduate and undergraduate team members. This gives students a rare opportunity to participate in the research process from inception to publication, giving them their first glance into the life of a professional anthropologist.

Fieldwork Training

The training component of the QRP has developed in response to the research goals of the Project, and has become an essential part of the involvement of students in the research process. The QRP has trained students from both universities. We believe that the training component has three unique features generally absent in other field training programs for U.S. students:

- 1) computer "simulated" field research as preparation for the actual period of field work;
- 2) the opportunity to receive additional training and carry out field research in Querétaro; and
- 3) the pairing of U.S. students with students from the host culture.

At UCSB, field methods are introduced to undergraduates in a course that uses multiple teaching techniques to introduce students to ethnographic methods. Reading assignments include standard texts and articles on ethnographic field methods as well as ethnographic monographs and articles on Mexican peasant villages. The course also employs the assignment of field exercises in the surrounding community.



What sets this course apart is the use of computer-accessed multimedia lessons, a simulation of ethnographic research in Mexico. These simulations give students experience integrating theory, methods, and data in a complex, interactive environment. It also moves the teaching of research "outside" the classroom into a different culture. Students using the multimedia simulations are able to explore realistic facets of field research, including resource limitations (such as time and funding constraints), situation decision-making (such as choosing an informant), dealing with conflicting or incomplete sources of data, and exposure to a foreign (for most students) language. They learn to appreciate the ambiguity of real world data.

A second, more advanced source of undergraduate training is the UCSB-UAQ field methods practicum in Mexico. This intensive field training is coordinated by faculty and advanced graduate students from both universities. For ten days, the UCSB-UAQ students live together in a house in the region to be studied. They review basic ethnographic data collection methods during lectures, and reinforce their skills with afternoon exercises in the surrounding community, by interviewing, constructing genealogies, collecting life histories, preparing community resource inventories, mapping the community and its household sites, and other data collection techniques. Paired students from the two universities are then placed with families in rural Querétaro communities for up to six weeks. The students take extensive field notes and keep a field journal, which are reviewed weekly with a faculty member. This field experience has a profound impact on undergraduates that is heightened by their collaboration with Mexican students. One student said that sharing a room -- and nightly talks -- with the daughter of her host taught

her a great deal about the role of women in the community, as daughters, sisters, and wives, without the censorship of information she might have experienced by talking to the girl in the presence of other family members.

Graduate students from both universities have also benefited from QRP training and research opportunities. UCSB graduate students have undertaken summer research projects in Querétaro, and several have carried out dissertation research there. While in Querétaro, they are granted visiting scholar status and they actively participate in academic activities. In the past, these activities have included teaching undergraduate seminars at UAQ as well as carrying out joint projects with their Mexican counterparts.

In a similar manner, Mexican graduate students from UAQ have attended seminars in development anthropology at UCSB as visiting scholars. One of the authors (Gutiérrez), a *queretano*, is currently a doctoral candidate in the anthropology department of UCSB; his research focuses on haciendas in Querétaro in the late 19th and early 20th centuries. Aside from receiving advanced training in anthropology, he has contributed significantly to the development of the fieldwork course and has taught it twice.

Mexican students have received training from other departments at UCSB as well, advancing technical skills such as Geographic Information Systems (GIS) development and remote sensing or cartography. They also take advantage of UCSB's extensive research library where they may find key resources not widely available in Mexico. While taking classes at UCSB, the Mexican students meet weekly the UCSB QRP team members (students and faculty) to discuss their work, participate in round table discussions, and

collaborate on the planning, analysis, and dissemination of joint UCSB-UAQ research.

Conclusions

Our experience with the development of this project has emphasized the benefits of including students in all phases of the research process, and has led to a multi-dimensional field methods curriculum. By exposing U.S. students to the ideas of their contemporaries in other countries, and by placing them in a field setting requiring collaboration with their peers, students contribute to and benefit from the intellectual and cultural values of the host culture students. Students who have participated in the QRP have an increased appreciation for the kind of skills they will need to apply once they enter an actual field setting. The participating students and faculty alike have been enthusiastic supporters of this project as well as substantial contributors to its development.

You can't really understand another culture unless you live with the people in that society, and our program offers that opportunity. What this means is that our students have a chance to live with the people they normally just learn about in books and films. The students live with them, live with the families, understand what they have to go through on a daily basis in order to survive, to make their lives work, to carry out the ceremonies that give meaning to their lives. The students learn how their hosts manifest their emotions, organize their daily existence, feed and clothe themselves, and meet the challenges and opportunities that people have to confront in another culture. These are things you cannot learn from books.

Manuel L. Carlos
Director, UCSB Querétaro (Mexico)
Research Project
Professor Emeritus of Anthropology and
Research Professor, UCSB

Juan José Gutiérrez
Research Professor, UAQ
PhD candidate, UCSB

Melody Knutson
Research Associate, UCSB Querétaro
(Mexico) Research Project
PhD candidate, UCSB



SUMMER FIELDWORK OPPORTUNITIES

Looking for adventure? For an opportunity to acquire new skills? Become a member of an archaeological excavation or a scientific expedition in the United States or abroad and learn about another culture -- past or present.

Organizations to Contact

Anthropology departments at local universities and colleges, state historic preservation offices, and state archaeological societies often organize local archaeological excavations and frequently accept volunteers with no previous fieldwork experience. The Archaeological Institute of America (AIA) offers a listing of state archaeologists as part of its yearly field school listing for the U.S. and abroad. This publication includes over 250 opportunities with all information about costs, deadlines, age requirements, and archaeological sites to be excavated and analyzed, for each field school. The cost for the *Archaeological Fieldwork Opportunities Bulletin*, including shipping and handling, is \$13.00 for members and \$15.00 for non-members. Please send orders and make checks payable to: Kendall-Hunt Publishing Co., Order Department, 4050 Westmark Drive, Dubuque, IA 52002; you may also charge your order to Visa or Mastercard by calling (800) 228-0810 or (319) 589-1000.

Archaeology magazine, published by the AIA, features an archaeology travel guide to sites open to the public in the Old World (March/April issue) and the New World (May/June issue).

Several organizations offer volunteer public participation in worldwide research expeditions. Many of the organizations listed below are non-profit, and participation fees

may be treated as tax-deductible contributions.

University Research Expeditions Program

University of California
2223 Fulton, 4th Floor
Berkeley, CA 94720
(510) 642-6586

Over 25 programs are open to the general public; no background or prior experience is necessary.

Earthwatch

680 Mount Auburn Street, Box 403,
Watertown, MA 02272.
(800) 776-0188; (617) 926-8200
Scholarships are available for teachers.

CEDAM International

One Fox Road
Croton-on-Hudson, NY 10520
(914) 271-5365
CEDAM stands for Conservation, Education, Diving, Archeology, Museums. Programs in marine research, science and ecology are offered. Fieldwork in St. Kitts (June 3-10), Bonaire (July 15-22) and Belize (August 19-26) will document marine flora and fauna in those areas. Scuba divers and snorkeling enthusiasts are encouraged to apply.

Foundation for Field Research

P.O. Box 2010
Alpine, CA 91903
or
Dept. P.
P.O. Box 771
St. George's, Grenada (West Indies)
(809) 440-8854

Selected Field Schools

Crow Canyon Archaeological Center is a non-profit institution specializing in Southwestern archaeological research and education. Several programs introduce participants to

archaeological field methods, laboratory techniques, and excavation. The Adult Research Seminars, consisting of week-long sessions, are conducted from June through October; transferable college credit is available. The High School Field School, also offering transferable credit, takes place from June 25 to July 22; applications should be mailed as soon as possible. The Educators' Workshop will be conducted from July 30 to August 5; three hours of continuing education credit are available. Write or call: Crow Canyon Archaeological Center, 23390 County Road K, Cortez, CO 81321; (800) 422-8975 or (303) 565-8975.

Summer Abroad through World Learning, Inc., the U.S. Experiment in International Living, offers students and adults opportunities to learn another culture through homestay, language-study, and ecologically-focused programs. Write: World Learning, Inc., The U.S. Experiment in International Living, P.O. Box 676, Kipling Rd., Brattleboro, VT 50302-0676; (800) 345-2929 or (802) 258-3173.

Picuris Pueblo in the Sangre de Cristo Mountains, New Mexico is the focus of an ethnographic field school, July 23 through August 13, sponsored by Middlesex County College. In addition to three weeks of instruction on southwest cultures and in field methods, students will live with Pueblo families and participate in village life, including pottery making, adobe construction and feast day. Write: Dr. Diane Z. Wilhelm, Middlesex County College, 155 Mill Road, Box 3050, Edison, NJ 08818-3050; or call (908) 548-6000, ext. 3099.

Center for American Archeology, Kampsville Archeological Center conducts educational research programs for junior and senior high school students, college students, and

volunteers, and also offers workshops for teachers. One to five week field schools for adults and high school students will be held June 5 through July 7. A field school with Individualized Mentored Research for high school juniors and seniors will be held July 10 through August 18. Volunteers can participate in site opening (May 28 to June 2) and closing excavations (August 21 through 25). Special Educators' Outreach weeks are August 7 to 11 and August 14 to 18. Scholarships are available for American Indian students. Write: Harry Murphy or Brenda Nord, Education Program, Center for American Archeology, PO Box 366, Kampsville, IL 62053-0366; or call (618) 653-4316.

Southwestern Archaeology on the Ground and in the Classroom is a graduate level archaeology field class for primary and secondary school teachers, offered by Arizona State University. Teachers, who can choose one of two sessions (July 11 to 26 or July 27 through August 11), will excavate Rattlesnake Point Ruin, a 90-room, 14th century pueblo in Lyman Lake State Park near St. Johns, AZ. For the course, teachers will develop a unit on Southwestern archaeology appropriate to the grade level taught. Write: Lyman Lake Prehistory Project, Department of Anthropology, Arizona State University, Tempe, AZ 85287-2402; or call (602) 965-6213. An academic field school for undergraduate and graduate students will also be held by Arizona State University, June 4 through July 8. Information is available from the same address.

Drew University in West Africa offers a comprehensive study of West African art and culture in Côte d'Ivoire (July 18 through August 17). In the Côte d'Ivoire, students will learn through apprenticeships about West African arts and crafts. Undergraduate or

graduate credit may be earned. Write: Off-Campus Program Office, BC-115, Drew University, Madison, NJ 07940-4036; (201) 408-3438.

Northwestern University's Ethnographic Field School (June 19 through August 12) is an opportunity to learn about the Navajo or Hispanic cultures of New Mexico and Arizona by designing independent research projects. Write or call: Professor Oswald Werner, Department of Anthropology, Northwestern University, Evanston, IL 60208; (708) 491-5402 or (708) 328-4012, evenings.

George Washington University Summer Field Program in Pre-Columbian Archaeology (June 10 through July 1; July 8 through July 29) will investigate the recently discovered Cueva de Rio Talgua ("Cave of the Glowing Skulls") and its associated site in Honduras. Students will be exposed to all facets of archaeological fieldwork (surveying, laboratory techniques, stratigraphic excavation, dating methods, photography), and evening lectures and discussions will provide background on the prehistory of Mesoamerica, particularly Honduras. Contact the Anthropology Department, The George Washington

University, 2112 G Street, N.W., Washington, DC 20052; telephone is (202) 994-6075; fax number is (202) 994-6097; and e-mail address is anth@gwuvvm.gwu.edu.

Human Origins and Prehistory in Kenya: The Koobi Fora Field School (June 3 to July 14; July 20 to August 30), offered by Harvard University Summer School and the National Museums of Kenya, introduces the wealth of paleoanthropological evidence at Koobi Fora and field methods in early human research. Write or call: Dr. Harry V. Merrick, Koobi Fora Field School, Harvard Summer School, 51 Brattle Street, Cambridge, MA 02138-3722; (203) 481-0674 or (617) 495-2921.

The Montclair State University Summer Field School is being operated by the Montclair State Center for Archaeology (July 10 through July 28). At the Black Creek site and associated Archaic and Woodland Period occupation and quarry sites, teams of undergraduate students will learn techniques of mapping, excavation, field recording, and laboratory processing of artifacts. Six credits may be earned. Contact Dr. Stanley Walling, Department of Anthropology, Montclair University, Normal Avenue & Valley Road, Upper Montclair, NJ 07043; telephone is



(201) 655-4119; fax number is (201) 655-5455. Deadline is April 15; early applications are encouraged.

Salt Center for Documentary Field Studies sponsors research on Maine life and Maine people. For example, participants in the past have documented tradition and change in Maine among American Indians, fishermen, store keepers, mill workers, farmers, and artisans. Students choose their own projects based on their background and experience, and can receive 12 credits through the University of Maine. There is also an opportunity for students to have their research published by the Salt Center through the photography and writing program. (June 12 through August 4). Write Salt Center for Documentary Field Studies, 19 Pine Street, P.O. Box 4077, Portland, ME 04101; or call (207) 761-0660.

Other Training Opportunities

Office of Elementary and Secondary Education (OESE) at the Smithsonian offers week-long courses in the sciences, arts, and humanities with in-service credit for teachers, K-12, from Maryland, the District of Columbia, and Virginia. Call OESE at (202) 357-2404 for a registration form after May 1.



BOOK RECOMMENDATION

The Emergence of Agriculture. By Bruce D. Smith. Scientific American Library, 1995. ISBN 0716750554, 231 pp., \$32.95. Distributed by W.H. Freeman and Company, 4419 West 1980 South, Salt Lake City, Utah 84104; fax: (801) 977-9712; telephone: (801) 973-4660.

Archaeologists now agree that agriculture developed independently in several places in the world, at different times and under different cultural influences. The domestication of plants and animals came about in a variety of ways, employing techniques that reflect human challenges working with various indigenous plants and animals.

In *The Emergence of Agriculture*, Bruce Smith documents the development of agriculture in five different parts of the world, with a chapter devoted to each (the Fertile Crescent, Europe and Africa, East Asia, Middle and South America, and eastern North America and the Southwest). In addition, Smith discusses how archaeologists have developed their theories over time, what discoveries have influenced changes in these theories, and how new technology has provided ways for testing them. In one chapter, Smith discusses why humans were motivated to domesticate plants and animals in the first place, and what benefits resulted.

This highly readable volume has excellent illustrations on nearly every page: maps, charts, line drawings, photographs -- even reproductions of paintings. The illustrations provide a wonderful visual backdrop for the text. Differences between wild and domesticated species of the same families are clearly demonstrated in photographs of side-by-side samples (leaves, seeds, bones) of each.

Drawings and photos of farming techniques and tools show how, even with limited resources, humans throughout the world have taken advantage of local resources. Both plants and animals are discussed, giving this book a broader scope than most books on domestication.

The Emergence of Agriculture is an excellent resource book for teachers, but is also valuable

as a text for college or advanced high school students. The book is a basic resource for all school libraries, since it is relevant to so many subjects -- World History, Geography, Anthropology, Archaeology, Ancient History, Biology and World Cultures.

Marilyn R. London
National Museum of Natural History



EDITORIAL NOTE

Ann Kaupp is currently taking a leave of absence from her position at the Smithsonian. Marilyn R. London has assumed Ann's editorial duties for the 1994-1995 issues of *AnthroNotes*. This first issue of Volume 17 is a combined Winter/Spring issue. The editors hope you find the materials stimulating and helpful!



POST SCRIPT

Have you moved recently? Please don't forget to notify *AnthroNotes*! You may have noticed that the back page of your *AnthroNotes* says "Address Correction Requested." If you have not notified us, and/or your forwarding order has expired, one of two things happens: either the issue is returned to us marked "Forwarding Order Expired" or the Post Office makes a copy of the back page and returns *that* to us - and throws away the actual issue! In either case, we have to pay for the initial mailing, pay for the return (50¢ for each return), and then pay to mail you another copy! Even more serious, the second mailing cannot be sent to you at bulk mail rates; we must send it in an envelope.

From now on, we will continue to ask the post office to notify us of address changes, but we will no longer automatically send a second copy of the issue. It is up to you to let us know if your address has changed. We appreciate your help in this matter, as we do not want you to miss out on any of our upcoming *AnthroNotes*!

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AnthroNotes Staff: Marilyn R. London (Guest Editor), Ruth O. Selig, Alison Brooks, editors; Robert L. Humphrey, artist.

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Anthro Notes

National Museum of Natural History Bulletin for Teachers

Vol. 17 No. 3 Fall 1995

THE REAL FLINTSTONES? WHAT ARE ARTISTS' DEPICTIONS OF HUMAN ANCESTORS TELLING US?

THE DRUDGE

You have probably seen her, frequenting the diorama scene at your local museum or in that coffee table book on human evolution. It's likely you've not given her a second glance, she is so much a part of the scenery. She is the Drudge-on-the-Hide; the woman on her hands and knees scraping away at the skin of a large animal, on the margins of the home camp scene. The men are usually center stage foreground, doing something interesting, while she's over there, hiding out. You usually can not see her face; she is looking down, and the artist may not have bothered to sketch in her brows or mouth. She is not talking to anyone; no one is talking to her.

Even in the high-tech Upper Palaeolithic, she never manages to get that skin up on a stretching frame and to work it sitting or standing, as do documented hide workers. The men may be down in the cave, trancing, dancing, and doing art, but she's scraping away, on all fours, same as back in *Homo erectus* times (Eugène Dubois was obviously not thinking of her when he named the species).

Conventionalized representations such as the drudge repeat themselves through the works of various artists, their postures and actions suggesting that artists have drawn from their own fine arts traditions, rather than from ethnographically informed suggestions from their scientist



THE ASCENT OF THE DRUDGE

collaborators. The "Drudge-on-a-Hide," for example, mimics the scullery maid scrubbing the floor in the background of 18th century evocations of bourgeois success.

THE GUY-WITH-A-ROCK

Another common motif, the "Guy-with-a-Rock" about to hurl a huge rock into a pit containing a large and unhappy beast (mammoth, mastodon, woolly rhino, or cave bear), suggests herculean figures in portrayals of classical myths. Though his hunting mates sport the latest ballistic weapons, this stone-age conservative has a hefty rock as his weapon of choice from two million BC to Holocene bison hunts in Dakota. One can imagine the dialogue:

"Dammit, Og, we told you to leave the rock at home and bring a spearthrower!" "Right, Og, remember last time, when the mammoth threw the rock back and broke Morg's leg?" "Hey! This rock has been in my family for a million years!"

THE DEER-ON-A-STICK

Homecoming from a successful hunt incorporates the "Deer-on-a-Stick" motif. The massive prey portrayed in most hunt scenes shrinks to a readily transported package, hefted on a pole between two extraordinarily tidy hunters. They are never shown bringing home dismembered animal parts, nor besmirched with gore. If anyone is portrayed close to such nastiness, it's Woman, crouched on a bloody hide. Faced with the lack of fit between ethnographic data on animal butchery and these scenes, one's mind readily wanders down Freudian, rather than archaeological, corridors.

"Man-the-Toolmaker," in fact the most common stereotypic portrayal of men at work, pounds stone on stone in a technique more suitable to smithing than to stone percussion, echoing mythical and quotidian blacksmiths in classic oil paintings. Depending upon where his anvil lies, the Toolmaker risks either blinding or genital mutilation, in which art he often appears jovially inclined to instruct the young.

MADONNA-WITH-CHILD

The other common female motif besides the abject Drudge is the "Madonna-with-Child," a youthful woman standing with baby in arms and doing absolutely nothing. Cumulatively, illustrations of palaeolithic women present a contrast to the busy lives of ethnographically documented mothers in hunter gatherer societies. Stone Age woman's life seems to have begun with a placid but immobile young motherhood, rooted decoratively to the spot as camp life swirled about her, followed by dull and dumpy middle age, hiding out on the margins of the fun stuff (still not a whit of social interaction), followed by aged and inactive sitting and watching, waiting for the palaeolithic version of the Grim Reaper to work his way up the valley. It is a wonder women learned to talk at all.

Once you really consider them, palaeolithic figures such as the Drudge and her companions do seem hackneyed and ethnographically uninformed. Anyone with experience of rural life nearly anywhere on the planet can see that they portray the Stone Age through a Western, suburban lens--two steps from the Flintstones.

Archaeologists can readily testify to the difficulties of assigning gender or maturational stage to most of the activities portrayed, in view of humanity's global diversity in cultural practices. Yet the graphic story reaching out from the museum halls and coffee table pages treats men's and women's--and youngsters' and oldsters'--estate as foregone conclusions. When viewed cumulatively, as we would see them in our lifetimes of museum-going and reading, the vast majority of existing portrayals give us a narrow and repetitious view of prehistoric human life.

THE VISUAL/INFORMATION GAP

Given this repetitiveness, it is easy to fault the artists for a lack of imagination in their mechanical reproduction of earlier motifs. However, the fault is really in the shared vision of artists and experts, archaeologists and palaeoanthropologists such as myself. Our vision in the literal sense has been faulty because we have not seen these stereotypes for what

they are and challenged their perpetuation. In the more abstract sense, our vision has failed, because we experts have not offered artists who seek our expertise better informed and more imaginative alternatives. Ironically, the texts accompanying such illustrations, usually drafted by science writers, often offer up-to-date, ethnographically informed perspectives. This emphasizes the great information gap between many of the artists and the text-based workers, a gap not bridged by scientific experts.

Many scientific experts may literally overlook visual depictions in museums or popular books simply because they are for the general public. Experts are trained to think of scientific communication as written text, and graphics such as illustrations of specimens, maps, and graphs as subsidiary material. Speculative reconstructions of prehistoric life are dismissed by many as "museum stuff," for the general public, and unsuitable for real scientists to use or even to help create.

This is a profoundly mistaken and potentially dangerous perspective. Portrayals of human ancestors present a parallel, visually based narrative of the human past. This visual narrative, because of its pervasiveness and communicative potency, must be taken seriously. Widely used in museums and popular literature, it represents much of the knowledge that laypersons have of the prehistoric past. In the face of Bernie Rubble and other enduring icons of pop prehistoricity, museums and educational books strive to impress and convince the viewer of "the real facts" through the power of visual arts. The style in which these portrayals are executed is central to their plausibility and power and merits a closer look.

For Western viewers, naturalistic representation is read as objective reporting, and rigorous naturalism characterizes science illustration. Historian of science Barbara Stafford argues in her book, *Body Criticism: Imaging the Unseen in Enlightenment Art and Medicine* (1991), that this stylistic convention developed over the 17th and 18th centuries, as scientists and explorers strove to present convincing images of newly discovered worlds within the

human body and around the globe. Given our cultural conditioning, the realistic graphic style itself advances claims for the plausibility of what it depicts. It is therefore the style of choice for science fiction graphics and Disneyland, as well as for prehistoric representations in your local museum or coffee table book.

As portrayed in artists' representations, the prehistoric past is enticingly "real" and accessible. Natural details of landscape, vegetation, animal life and the painstakingly reconstructed hominid bodies themselves render the scenes plausible. These people, or near-people, have hands, eyes, facial expressions, and they draw us in toward them. Yet the "naturalness" of the human bodies, their expressions and gestures, serves to subtly support another argument for plausibility that we overlook at our peril: that their social world as depicted was also real. These bodies are gendered, they display the marks of age, and they exist in the scenes as socially identified actors. If their realistic style and context are arguments for their credibility, then what primordial human conditions are conveyed, so powerfully and plausibly?

GENDER/AGE DISCRIMINATION IN VISUAL REPRESENTATIONS

To further explore this question, I recently analyzed 136 pictures of early modern humans ("Cro-Magnons") of the last Ice Age in books readily available to lay readers in North America, Great Britain, and France (published in "You Can Hide, But You Can't Run: Representation of Women's Work in Illustrations of Palaeolithic Life," *Visual Anthropology Review* 9:3-21, 1993). I documented the types of persons and activities portrayed and commonly repeated motifs, such as the Drudge, looking for the cumulative pattern of artistic choices in portraying different ages and genders. As a whole, the portrayals consistently exclude children and older people from active, useful roles. They represent women's work in patronizing ways, if at all, implying that the real early human story consisted of a suite of male activities, which are themselves really rather limited, too.

Who and what most often fills the frame of these portraits of the past reveal the assumptions of both makers and viewers. Of the 136 pictures, around 85% include young to middle-aged men; only half include women; children appear in slightly over forty percent of the scenes, and elders in less than a fifth. Although scenes depicting men exclusively are common, only 3 of 136 portray women only, and no pictures show only elders or children, or any combination of women, elders, and kids without men. Of the 1076 individual human figures in these pictures, about 49% are men, 22% are women, 23% are children, and around 6%, older persons.

Critics of Western art and advertisements have shown that men's and women's bodies are differentially represented in dynamic motion, with women's bodies being placed in lower positions and shown in more static poses than those of men, and that active, "important" activities are in the hands of men (e.g. Berger 1972; Goffman 1976). It should come as no surprise that these portrayals of Cro-Magnon men show upright walking and running more frequently than would be predicted from their proportion in the sample, while the opposite is true of women. Males are also disproportionately depicted with arms in dynamic motion, as when making and wielding tools or lifting loads. Women are less often shown in such dynamic poses, and children, never. Elders are almost never represented upright, much less in motion or doing anything active. Only men of a certain age participate in hunts, carry game home, and conduct rituals. It is mostly men who construct, create art, make tools. Only women scrape hides, hold babies, or touch children.

THE QUESTION OF RACE

This article does not permit an extended treatment of the equally important question of which racial groups are recruited to visually depict stages of hominid evolution. I invite the reader to engage in a brief examination of magazine covers concerning human evolution, to see which genders and racial features "sell." For example, U.S. magazine representations of "The Way We Were" (*Newsweek* 1986) show "our" ancestral modern human as white,

male, and in his prime. Discussions of the "African Eve" hypothesis for modern human origins in *Time* and *U.S. News* offered a diluted Africanity in the faces they presented, and "Eve" naturally required a male companion for inclusion on a cover.

Ruth Mathis, a graduate student in archaeology at the University of Massachusetts, Amherst, wrote a compelling indictment ("Race and Human Origins Narratives: Whose Past?," unpublished manuscript, 1991) of traditional visual narratives of human evolution from an African-American viewpoint. Specifically, she pointed to the common practice of presenting dark-skinned australopithecines and light-skinned modern humans as opposite ends of the evolutionary spectrum. One can make biologically-based arguments for portraying the earliest African hominids with heavily pigmented skin, but Mathis notes there is no compelling scientific basis for consistently choosing white people to represent the most advanced species, since non-European varieties of modern humans populated all continents by the end of the Ice Age. She stresses the alienating impacts of these visual narratives on the children of color who visit museums to learn more about human history and view these narratives with their own consciousness of racial stereotypes.

TOWARD MORE EQUITABLE AND REALISTIC REPRESENTATION

The challenge for illustrators and experts really is not to fashion politically correct portrayals of human ancestors--drawing a Guy-on-a-Hide or a Gal-with-a-Rock--nor to produce accurate but pedestrian ones--daily trips to the waterhole, perhaps. Nor should we throw up our hands and say real scientists should not use such inevitably speculative illustrations anyway. Exciting exceptions to the stereotypic rules of illustration do exist. French illustrator Veronique Ageorges (Ageorges, Veronique and Saint-Blanquat, Henri, *Lascaux et Son Temps*, 1989) and former Smithsonian artist John Gurche (e.g. "Almost Human" by Tom Waters in *Discover*, 1990) have created scenes that reflect a deep appreciation for the rich archaeological and ethnographic resources available. Their human ancestors engage in a range of technically believable activities, and

include strong older persons and capable women and children, interacting with one another in good and ill temper. Women, children, and older persons break the confines of their occupational straitjackets, making art, dancing, fabricating tools, and foraging away from camp. Men wear ornaments, smile, and are idle. Significantly, these artists have built on their own expert knowledge, rather than relying on the testimony of other experts, who, for the most part, have seemed little concerned with the social content of these dioramic scenes.

As a scientist, I see these artists' representations as science fictions--visually mediating the often complex research tactics of specialists for an interested, educable public. When I call these reconstructions science fictions, I mean no slur. In fact, strong philosophical parallels exist between what "real scientists" trying to understand unseeable ancient events do and what a careful artist does in these representations. We each link together points of scientific fact--things we think we know for sure--into narratives of educated guesses and arguments of plausibility. From this perspective, the work of the most thoughtful of my artist colleagues in portraying ancient humans exactly parallels my own struggles to make sense of the evidence actually left behind by them.

Once each acknowledges the social power of the visual assertions about our ancestors that populate our museums and popular books, rich possibilities for collaboration between scientists and artists emerge. As an archaeologist trained in an anthropological view of the past and a citizen of an ethnically and racially diverse nation, I believe we can serve the greater public by expanding the range of possible pasts represented in depictions of prehistoric people. I am not arguing for revising past worlds as they have conventionally been represented using a representational quota system, by which various ages, genders, and races get their fair share of prestige as defined in these works--where women hunt, men scrape hides, old folks run and dance--though all probably did a good deal of these activities. Rather, why not combine

scientific rigor and creativity to offer viewers social arrangements different from any known today, or hominid species with truly different adaptations and behaviors? By picturing unexpected past worlds--inhabited not by mimics or parodies of ourselves but by those who may have been strong, successful, yet very unlike us--we might succeed in actually drawing more viewers into the real problems, possibilities, and pleasures of research on the past.

Diane Gifford-Gonzalez
University of California, Santa Cruz

For further reading:

Berger, John. *Ways of Seeing*. New York: Viking Press, 1973.

Goffman, Erving. *Gender Advertisements*. New York: Harper Colophon, 1976.

"The Way We Were. Our Ice Age Heritage: Language, Art, Fashion, and the Family," *Newsweek*, November, 10, 1986.

Rudwick, Martin A. J. *Scenes from Deep Time*. Chicago: University of Chicago Press, 1992.

Waters, Tom. Almost human. *Discover*, May, 1990:43-44,53.

(continued on page 6)



TEACHING SUGGESTIONS:

After reading Gifford-Gonzalez's article, students might engage in the activities discussed below that allow them to conduct their own library research on age and gender representation. While these questions relate to the subject of this article, they can be applied to any topic or historical period and even be extended to magazine ads, television commercials, and posters.

1. Looking through books, including college texts, with illustrations on the Palaeolithic, note what subjects were chosen for the illustrations and why. Who, with regard to age and gender, is situated in the foreground, in the background? Who is standing up, sitting down? What does this imply?

2. Look for standard reference books such as an encyclopedia that usually reserve space for just one illustration to represent a particular topic. What was chosen to illustrate Ice Age people or the human evolution section? What gender is represented and what are they doing? Why do you think the illustration was chosen?

3. In books on paleolithic art, who created the art (males or females)? How do or could we know people's roles of that time? Why do we come to these conclusions? (In a multicultural class, you may find the students' answers differ, based on their own cultural values and experiences.)

4. From the books you have reviewed, what is not illustrated? For example, have you found illustrations of butchered animal parts, people bloody from butchering animals or from injuries incurred from hunting or from everyday living? Do you see children playing, parents expressing affection, people chatting? Are children doing anything useful (babysitting, gathering)?

5 Do you think the illustrations you have come across provide a full portrayal of life in the past? If you were from another planet, what would you learn? Some questions you may wish to ask are: Who are the most important people? The least?

Who are the responsible members of the group? What do their daily activities consist of?

6. Students might look at their own family stories and discuss what their grandparents did as children and as adults. In their own households, who makes dinner, who takes part in childcare? How have the times changed regarding the roles of women and men today? How might family roles differ for students from different cultural backgrounds?

The Time-Life Emergence of Man Series would be useful for this exercise:

Constable, George. *The Neanderthals*. New York: Time-Life Books, 1973.

Edey, Maitland N. *The Missing Link*, 1972.

Howell, Francis Clark. *Early Man*, 1973.

Prideaux, Tom. *The CroMagnons*, 1973.

White, E. and Brown, D. *The First Men*, 1973.

About the Author:**Diane Gifford-Gonzalez**

I have always been fascinated with history, and I still read books on history for fun. I am sure that part of this fascination stemmed from poring, in those pre-television days of my childhood, over my parents' collection of old *National Geographic* magazines, featuring artists' portrayals of daily life in ancient Sumer and Egypt. In the university, I bounced around from art history to Near Eastern languages, and on to physical anthropology before finally landing in prehistoric archaeology and receiving a Ph.D. in anthropology in 1977 from the University of California, Berkeley.

For the last twenty years plus, I have worked in Kenya and Tanzania, investigating the early uses of introduced livestock by Africans and conducting a variety of research projects aimed at better understanding archaeological materials--especially animal bones.

(continued on p.9)

MOVIE REVIEW: *POCAHONTAS*

Pocahontas is a typical Disney fairy tale, a modern descendant of Disney's 1937 *Snow White*. The earlier romances were all animated versions of fairy tales or fiction for children: *Cinderella*, *Beauty and the Beast*, *The Little Mermaid*, *Aladdin*, *Peter Pan*, and *Sleeping Beauty*. But this one is based on a true story, or rather, is a fictionalized elaboration of some ideas about what happened between some real people in Virginia in 1608-1609. There really were individuals there called Pocahontas, John Smith, Powhatan, Ratcliffe, and Kocumom. But the story in the film is actually less well-founded in historical and ethnographic reality than is the often told story about George Washington and the cherry tree.

The movie presents a budding romance between two protagonists. Pocahontas is a beautiful, buxom, tan young woman with long black hair, oriental eyes, and an "Indian" nose in profile (but lacking a bridge in full-face), who has a tasteful tattoo on her upper right arm and wears a skimpy off-the-shoulder dress of fringed leather. Captain John Smith is a handsome, tall, muscular, clean shaven, young white man, with long blond hair and blue eyes. Perhaps a mixture of Richard Gere and Tom Cruise, he wears tight trousers, high loose boots, shirt sleeves turned up, and vaguely 17th century helmet and cuirass. The two exchange a few words in mock Indian (taken from the vocabulary in

Strachey's history of the Jamestown colony), but Pocahontas immediately speaks impeccable English to Smith. Other ethnographic details are hardly more realistic. A few bits have been taken from the historical record on Virginia Indian culture of the period, but these are mere fragments of local color, and most of them are not convincing. One example among many is the robe that Powhatan briefly dons. This is based ultimately on "Powhatan's mantle" in the Ashmolean Museum in Oxford, but the version

we are shown comes from an inaccurate, simplified copy that is now exhibited at Jamestown. In addition, informed scholarship has long held that the shell-decorated hide panel in Oxford is not a mantle and cannot be surely associated with Powhatan, although it did originate among the Indians near the Jamestown settlement.

Other elements of Indian-ness in the movie are based on positive features in the modern stereotype. For example, the animated tree called "grandmother willow" tells Pocahontas, "All around you are spirits, child. They live in the wind, and the water, and the sky. If you listen, they will tell you." Powhatan tells his daughter, "Let the spirits guide you." He greets her

with the remark "My heart soars," quoting Dan George in *The Little Big Man*, perhaps the finest feature film on the Indian-White experience. The Indians are fundamentally good and right, although ill-informed about the English. The English, and especially Ratcliffe (here their leader, but not in reality), are caricatured as mad gold seekers, ill-informed about the Indians. It may be aspects like these that have led Russell Means, the old activist



Matoaka alis Rebecca daughter to the mighty Prince Powhatan Emperour of Ananoughkomock alis virginia converted and baptized in the Christian faith; and wife to the worth M^r John Rolfe. Compen Holland excu

for Indian rights, to comment that "It [Pocahontas] is the finest feature film ever done in Hollywood on the Native American experience." But perhaps his judgment was affected by his own employment by Disney to provide the voice of Powhatan in the movie. It does seem significant that this love story does not have a happy ending in the film. After Pocahontas saves Smith, persuading her father Powhatan not to kill him, the romance ends as the wounded Smith sails for England, while Pocahontas stays in Virginia, feeling she belongs with her own people.

Questions about the accuracy of the movie may be answered in several ways. One might begin by saying that this is in no sense a documentary, that accuracy was not a high priority for the writers and artists. If it had been, what sources could have been used? There is little reliable direct evidence on the details of Virginia Algonquian culture, material or non-material. The most appropriate sources are: (1) John White's watercolors representing the Indians of Roanoke (prepared 50 years earlier and 100 miles away) especially for such things as houses, clothing, weapons, music and dance; a source only sparingly used by the Disney artists. (2) Archaeological evidence from the Jamestown area, which was not used. (3) Materials on other Indian cultures of neighboring areas in the 18th century when reliable evidence was recorded and objects were collected. Little was used here. Anthropologists and modern Indian people also have ideas about appropriate attitudes and behavior, but these can only have a rather remote relation to the long-lost reality of life in Virginia about 400 years ago.

One is on slightly firmer ground in evaluating the historical accuracy of the basic story line. It is clear that when Pocahontas and Smith first met, she was 11 or 12 years old and he was 27. Her appearance, other than her age, is documented only by a rather uninformative engraved portrait done in 1616. But Smith is known to have been rather short and stocky, sporting a bushy full beard. Smith left for England in October, 1609. Pocahontas was often in the Jamestown settlement thereafter, and acted in some respects as an intermediary between her

people and the English, until she was captured by the English in 1613. Kocum, who in the movie is her fiance and is killed by the English, in fact is said by one historical account to have married Pocahontas in 1610. Then on April 5, 1614, she married the Englishman John Rolfe, when she was 19 or 20 years old. Their son Thomas Rolfe was born in 1615, and the next year the family went to England where Pocahontas died in March, 1617.

There is very little evidence for any romantic relationship between Smith and the young girl that Pocahontas then was. The well known story has her saving him from execution just at the time that they first met, in January, 1608, when he was brought as a captive before her father, Powhatan, the paramount chief of the area. One difficulty is that Smith is the only source of the story, and he did not introduce it in his earliest writings on Virginia, but waited until several years later. Another problem is that, according to Smith, several times during his earlier adventures in Turkey and the Balkans, a woman of high status saved his life or helped him escape captivity. This is, of course, an old element of folklore, which at best influenced Smith's dramatic accounts of his life. Even if some such event actually occurred when he was taken captive by the Virginia Indians, it is possible that Smith misinterpreted a dramatic mock execution that was part of an adoption ceremony, in which Pocahontas played the traditional role (perhaps assigned by her father) of a woman who adopted as son or brother a prisoner of war who would otherwise have been killed. This deduction is based on evidence of type (3) above, for the custom is not documented for the Virginia Indians but is recorded for Indian tribes to the north. The rescue is of course the central feature of the traditional history (or myth), but it fills a rather different position in the plot of the Disney story. The message of Disney's historical myth is one of interethnic conflict, based on greed and ignorance, that was defused by an intelligent young Indian woman in search of romance. This may have some slight basis in real history. It is certainly true, although rarely recognized, that intermarriage between Indians and Europeans (and Africans) in the first centuries of contact was an important

mechanism for peaceful solution of interethnic conflicts. One may wonder whether it is only for dramatic effect that Disney's retelling omits the miscegenation that actually occurred between Pocahontas and Rolfe. That marriage provides another reason, besides her supposed rescue of Smith, for her continuing fame and significance in American history. The movie can be recommended for its simple, dramatic plot; its wonderful, artistically sophisticated animation, and its use of classic Disney animal characters, who play their traditional comedy roles as well as emphasizing the supposed closeness of Indians to the natural world. It is a fairy story with a fundamentally positive message about Indian-White relations. It is not a useful document about Virginia Indian culture.

Viewers whose interest is aroused can be referred to *Pocahontas and her World* by Philip L. Barbour (Boston: Houghton, 1970), for a reasonable reconstruction of Pocahontas's life story, including her relations with the English and her position in her native society. For information on Virginia Algonquian culture of the time, the best places to begin are Christian F. Feest's article "Virginia Algonquians" (pp. 253-270 in vol. 15, *Northeast*, Bruce G. Trigger, ed., 1978, of the *Handbook of North American Indians*. Washington, DC: Smithsonian Institution), and Helen C. Rountree's *The Powhatan Indians of Virginia: Their Traditional Culture* (Norman: University of Oklahoma Press, 1990). On the Pocahontas myth (but not on its relation to ethnography or history), see Robert S. Tilton, *Pocahontas: The Evolution of an American Narrative* (New York: Cambridge University Press, 1994). A very different, and amusing, version of the relation between Pocahontas and Smith was invented by John Barth, for his novel *The Sot-Weed Factor* (New York: Doubleday, 1960)--probably not to be recommended for high school or younger students.

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[Rountree recently published a children's book titled, *Young Pocahontas in the Indian World*, available from Helen Rountree, c/o J & R Graphic Services, Inc., 124 Production Dr., Yorktown, VA 23693.]



(About the Author: Diane Gifford-Gonzalez, continued from page 6)

A question that seems to underlie a lot of my research is: How do we know what we know about the past? This question has moved me to do studies in ethnoarchaeology and experimental archaeology and to write on the limits and potentials of animal bones in archaeology. My research on the messages implicit in artists' portrayals of human ancestors may seem far removed from my other professional interests at first sight. However, I think I am asking, in a different register, how we know what we think we know about the past. Specifically, I am trying to uncover what influence these depictions have on our understandings of the past, both as laypersons and as professionals.

I am delighted to expand my readings into recent work in art history and to come full circle, in a way, returning to the illustrations that drew me as a child into wondering about what it was like to be alive in the remote past.



The November/December 1995 issue of the free publication *Art to Zoo* features "**DeCoding the Past: The Work of Archaeologists**" that includes lesson plans. Write: Office of Elementary and Secondary Education, *Art to Zoo*, Arts and Industries Bldg. 1163, MRC 402, Washington, DC 20560.

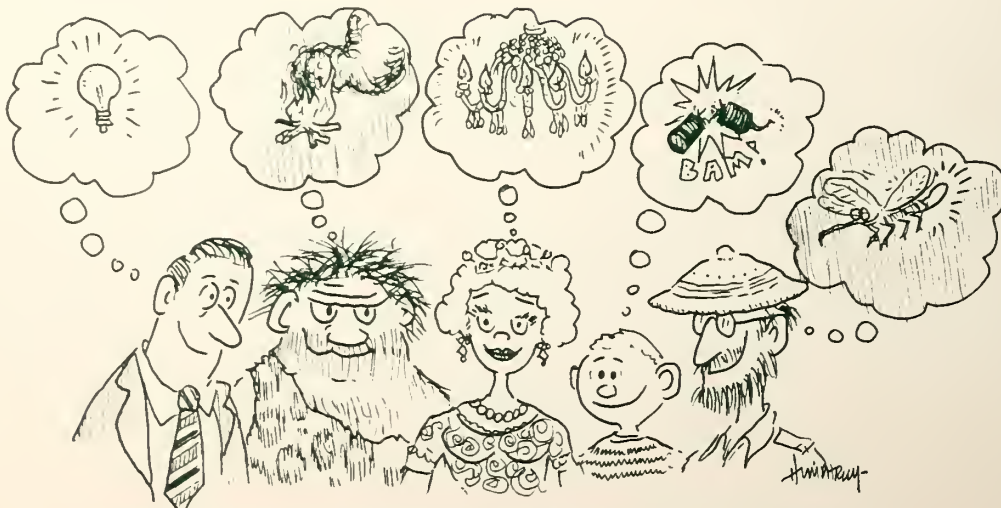
CULTURAL BIAS IN TESTING: AN ANTHROPOLOGIST'S VIEW

Anthropologists often object to "Multiculturalism" when it focuses only on the trappings of different cultures--like food or music. Real multiculturalism goes deeper. It is harder to grasp, and more threatening; it addresses our intolerance, but it holds the key to real understanding and rich cultural exchange.

As anthropologists know (but few others understand), cultures differ not just in their obvious trappings but in more basic and subtle ways: patterns of thinking; logic, perception, construction of categories, goals, and values; ideals, morals, rhythms, emotions, and probably even psychological structure. To make a simple analogy to language, cultures do not just differ in vocabulary; they also differ in sound and grammar. Cultures have varied deep structures underlying their superficial differences just as languages have grammars that underlie their vocabularies. The differences are mostly learned, not genetic. A human baby can grow up functioning in any culture its caretakers teach, just as it can grow up speaking any language it is taught.

Most of these cultural behavior rules are arbitrary. All cultures must conform to nature to ensure survival. If you don't eat, reproduce, avoid biological damage and manage illness correctly (often within broad limits), you do not survive. But much behavior--from food choices to poetry--is simply arbitrary convention, things that we agree to do a certain way for the sake of consistency and predictability, much as neighbors agree to speak a particular language although any shared language would do.

These arbitrary cultural differences run surprisingly deep. Culture, not biology, says that adult American women can cry but men should not. Culture, not biology, says that men lust after the sight of women's breasts. (In many cultures they do not.) Much of our "logic" is also culturally derived. The "socialization" of children is largely a process of teaching them the arbitrary rules. We teach them what NOT to do. (In our society, for example, boys but not girls are taught not to cry. In many cultures all children are taught this.) All cultures limit freedom of action, expression, and even thought in the name of consistency and predictability. Cultures, including our own, are blinders that keep people looking in the "right" (i.e. the agreed) direction.



SOME CULTURAL DIFFERENCES IN PERCEIVING INTELLIGENCE

Comprehending how much of our own cultural system is arbitrary is perhaps the hardest lesson. Just as learning English as a baby makes some sounds seem natural and others unnatural, so being raised in middle class American society makes it hard to comprehend other peoples' thinking and behavior. Worse, socialization can make us blind to the very existence of alternatives, reducing tolerance of other cultures and our ability to think critically about our own assumptions.

Contemporary standardized tests demonstrate many of these points since they include many items that still demonstrate serious naivete about what people in other cultures are familiar with. One is asked, for example, to notice that a cute suburban house has an incomplete chimney. But not all youngsters have seen such a house. More important, how many have lived near (or in) such houses enough to make them objects of real interest? The mere existence of such structures somewhere in the general environment is not enough, if they have no meaning to the individuals being tested. We all learn things better when they have real meaning for us. Also note that people need not be completely ignorant of such items to be penalized on the test. They will also do badly if they are slow because their responses are less automatic.

This is only one example of the many questions posed in standardized tests in which the cultural content, the specific items, of the question, is biased. Well meaning testers try to correct these by using more culture neutral items (if such exist!). But the biases also extend beyond the content or the items selected to other arbitrary American cultural rules and assumptions that are built into the questions. It is these biases that destroy the validity of even the "fairest" test. Apparently, few people understand this.

Often the form of the questions themselves is culturally biased as for example when conventional drawing styles are used. Consider a test question showing a drawing of two cats silhouetted in front of the sun/moon. One is supposed to note that one

cat has no shadow. But to get the question right, you have to know what the simple drawn figures stand for--our drawing of the sun and moon are particularly conventional, not accurate--and that a squiggly line below one cat is actually a shadow behind it. The graphic style is unknown to many cultures or even to anyone reared on television rather than on picture books.



Consider analogies; we think that analogies test simple logic. But analogy problems are questions about the categories in which we put things. The categories determine logic. An analogy exists only if pairs of items can be put in the same group. But categories are cultural conventions, not revealed "truth." Other cultures categorize things in different ways and therefore would set up different analogies and get our test questions wrong or find them nonsensical. (Remember, we categorize objects in many, often conflicting, ways: by size, color, material, function, place of origin, or (as in a sewing basket or workshop) by things that complement each other or operate on each other in certain tasks like a needle, thread, and a torn shirt. Different classifications are useful in different situations, but no way exists to say that one is obviously "correct" in the abstract. The only way to know which categorizing scheme applies in a particular context is to be initiated into the local culture.

Cross-cultural studies in psychology (Cole and Scribner 1974; Cole, Gay, Glick, and Sharp 1971) have shown that the way people classify things depends on many variables including the situation; the question asked; the types of objects presented;

the familiarity of the objects; and the amount of formal, literate, Western schooling people have had. And they show how what appears initially to be an inability to classify in a certain way can disappear once the tester learns the cultural rules of the group or asks the right question.

North American-trained doctors have often had trouble communicating with Latin American patients. The doctors are trained to work with the categories "germ" and "antibiotic." But many Latin Americans faced with knowledge of diseases and antibiotics have a classification system that they consider more fitting: the opposition of "hot" and "cold." Some diseases and some antibiotics are classified together as hot, some as cold. The critical principle is to oppose a hot antibiotic to a cold disease and vice versa. Their logic comes from different categories, which we have great difficulty understanding, so we are uneducated and perhaps unintelligent by their standards. If they constructed an analogy test, we would be expected to recognize immediately that the most important categorizing principle was the "temperature" of items. Perhaps our classification is "better" because it is more "scientific" (although germ theory, too, persists despite being inaccurate in many of its applications). But even if the Latin American system is less accurate, people are socialized into it.

Consider a question that involves identifying one of two famous scientists, Albert Einstein or G. W. Carver. The question involves an obvious (but too simple) gesture toward "fairness" by permitting identification of a Black scientist or a White one. But it is hardly "fair," because the category "scientist" itself is a more significant category in White American culture than in Black culture. (Several of my Black associates consider Carver a "White man's Black hero" because he did "White" things.) Whites are therefore culturally more likely than Blacks to recognize a scientist of any color.

But this example also has at least one more bias that is much more subtle. (It may or may not apply to Black/White differences but surely applies more

broadly.) There are various ways of "knowing" things or people. This question favors people who "know" visually and utilize portraits and picture books. In a culture in which parents told stories rather than reading aloud from picture books, and oral tradition was important, people might know a person like Carver or Einstein very well but be less familiar with pictures.

And, consider a question involving two sets of cartoon figures in which one is supposed to notice whether any figures from the first set are repeated in the second. The answer is "no" because, although two pseudo-human figures are very similar, the diagonals on their tunics are reversed.

The use of cartoon figures supposedly eliminates cultural bias. But what is actually tested? The key question is whether one perceives and considers it worth noting that the diagonals are reversed. Anyone from a culture in which sex was indicated by the diagonals on peoples' clothing would get this right because their culture taught them to focus on this distinction. But most of us have been taught by our culture to tune out such distinctions. Think about earrings on males. Most of us probably pay no attention to whether a man's earring is in his right or left ear. We tune out the distinction. Yet some Americans notice because to them the distinction conveys important information about sexual preference..

In order to simplify the bewildering array of information reaching us, we all learn to tune out things that have no cultural significance. This is why unsocialized children often "notice" things their elders ignore. Different cultures teach different rules about what to tune out, just as we learn to tune out the subtle distinctions in vowel sounds that French speakers are taught to hear or just as Inuit (Eskimos) see many distinctions within what we lump together as "snow. So this question, too, is a test of cultural habits not intelligence.

The point is that even if we look beyond the obvious cultural content of tests, the questions can readily be shown to be culture bound at a multitude

of additional levels like the layers of an onion. And, like an onion, peeling away the layers of bias leaves nothing. No matter how hard we try, we are testing cultural awareness, not intelligence. There is no such thing as measuring pure thinking ability because all tests (and probably all thought itself) build on cultural categories just as all language builds on conventional grammar rules. I personally have been able to dissect every test question I have seen in this manner and I invite you and your students to try. It is a real learning exercise. Ask yourselves what unspoken American assumptions each question makes beyond its obvious cultural content.

Awareness of the real depth of cultural differences is both frightening and exhilarating. It is frightening because it raises the specter of greater complexity in dealing with others and greater humility and flexibility about our own assumptions. The excitement comes from contemplating how our lives could be enriched. Think of how dull our food, our music or our dress would be without the enormous recent influx of foreign influence. Is that all that other cultures have to offer? Medical anthropologists and doctors are discovering important new (to us) ways to think about and treat disease processes and illness by looking at traditional healers in other cultures. And, for all of our emphasis on "family values," we have much to learn (including new ways to think) from cultures in which families and the associated values play a far larger role. Imagine the ways that other aspects of our lives and thoughts could be enlarged if we opened ourselves to real multiculturalism.

Cole, Michael and Sylvia Scribner. *Culture and Thought*. New York: Wiley, 1974.

Cole Michael, John Gay, Joseph A. Glick and Donald W. Sharp. *The Cultural Context of Learning and Thinking*. New York: Basic Books, 1971.

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BOOK REVIEW:

GIVE AND TAKE OF EVERYDAY LIFE: LANGUAGE SOCIALIZATION OF KALULI CHILDREN by Bambi B. Schieffelin (Cambridge: Cambridge University Press, 1990).

In an ethnography about the Kaluli, a Papua New Guinea group, Bambi Schieffelin expertly and thoughtfully shows how much can be learned about a culture from observing, recording, and analyzing the ways mothers socialize their children through language. Schieffelin's fieldwork occurred in 1967-8, 1975-7, and 1984. Her husband, their young son, and she stayed in Sululib, a community of 101 individuals on The Great Papuan Plateau in the middle of Papua New Guinea, off the northwest coast of Australia.

As a woman, Schieffelin was given "privileged access to the activities of women and children. No man could have sat in the women's section or gone bathing with small children" (p. 23). Since she was also a mother, she was viewed as an adult. Early on she recognized she could not be an impartial observer. The Kaluli brought her into their world giving her kinship or relationship names. They drew lines, however; she was referred to as yellow-skinned and different.

In this Kaluli community she studied, some lived in long houses made from bark and leaves; others lived in separate family dwellings. They hunted in the bush for small animals, fished, and gathered wild edibles, but most of their food came from gardens tended by the women. The primary foods were sago (a starchy foodstuff derived from the soft, interior of the trunk of various palms and cycads), greens, and scrapings from long cobs of pandanus (a plant of the genus *Pandanus*). Schieffelin studied primarily three families and selected four children: Meli (a female), Wanu (a male), Abi (a male) and SueIa (a female). She chose them because they were already using single words or just starting to use syntax and because the mothers were willing to explain the recordings she

made and the interactions with Schieffelin. She had a total of eighty-three hours of naturalistic interaction between children and their mothers, siblings, relatives, and other villagers.

Schieffelin's choice of families also reflected the social change affecting the village from the late 1960s to the 70s and 80s. SueIa and Abi, 25 months, lived in a family with a mother, father, and two older sisters. The parents were the most traditional, practicing strong food and post-partum sex taboos; having a strong belief in witches; and procuring food through hunting, fishing, gardening, sago making, and gathering. They also lived in a long house and had almost no interaction with Christian missions. Wanu, 24 months when the study started, also lived with a mother, father, and two older sisters. The males wore traditional simple pubic coverings, and the girls donned skirts made of string and inner bark. At Christian events such as weddings, the parents and children wore Western clothes that they purchased at mission stores. The family feared witches, and the mother followed menstrual taboos and went to a menstrual hut during her period. Finally, Meli, aged 24 months, came from the least traditional family. She was the first born, and her brother, Seligisc, was 7 months old. They lived with their mother and father in a single family house in a Christian area. Both parents, baptized Christians, were members of the Evangelical Church of Papua. They wore Western clothes, did not believe in witches, and did not follow any of the food, menstrual, or post partum sex taboos that effectively spaced children about 32 months apart. Also Ali's mother did not have time for sago making.

In the Kaluli society, face-to-face interactions are key, because they express cultural values. In her study, Schieffelin assumed "the process of acquiring language is deeply affected by the process of becoming a competent member of a society. The process of becoming a competent member of society is realized to a large extent through language, by acquiring knowledge of its functions, social distribution, and interpretations in and across socially defined situations. . ." (p. 15). She

concluded that a person does not "acquire culture"; a person "acquires a set of practices that enable one to live in a culture" (p. 15).

According to the Kaluli, children do not learn language by babbling or waiting for a genetic program to start. Instead, they must be "shown" language in order for them to learn it. Interactive and cumulative learning are key. Language begins when the young child says "no" meaning my mother and "bo" meaning breast. A child may have used other words but these two words are culturally essential. Children who do not talk, who have not yet said "no" and "bo" are not part of the everyday sharing and reciprocity. Thus very few demands are made on children who do not use language to share or cooperate. The mother is the primary teacher since she shows language to a child. The mother-child relationship also underscores the social view of language because the first social relationship a person has is between mother and child, mediated by food from the breast (p.74). According to Schieffelin, "the giving and receiving of food is a major means by which relationships are mediated and validated" (p. 74).

Understandably then, baby talk is not encouraged. "The goal of language development is to produce speech well-formed and socially appropriate, enabling individuals to establish and maintain sociable relationships" (p.105).

Interestingly, monologues do not exist in Kaluli life, even children talking to themselves in imaginary play. When Schieffelin's son did this he was considered "really different." In Kaluli society, people are rarely alone. To be alone is to be vulnerable to negative forces such as witches. If a person is alone, he is suspect.

Interdependence is also evident in the word "ade." An ade relationship between siblings, especially an older sister and younger brother is the most important bond between men and women outside marriage. Food sharing is frequently from an older sister to a younger brother, and he feels "owed." Ade then conveys expectations of nurturing,

sharing, and giving compassion. An older sister is expected to share food. Through language children learn to ask in an assertive Kaluli manner and through adequate relationships to feel sorry for and give to others. As readers, we now understand how children learn a contradiction and live with it. Each is an individual and negotiates with others for food and other objects. At the same time, each child also learns that he must be and is interdependent.

Schieffelin also shows ably through language how gender roles are reinforced. Threatening demeanor and aggressive actions are not tolerated in girls, even from an early age (p.203). Girls are encouraged to be compliant and nurturing. Even though mothers may express frustration and anger toward sons, they treat them in a preferential manner giving them more food, especially more meat and attention than they give daughters. They treat the daughters far more abruptly and critically. These contradictory attitudes make sense to Kaluli mothers because daughters grow up, get married, and move to other villages to live with their husband's families. Boys, on the other hand, belong to the mothers. If their husbands die, the sons would take care of them.

Gender then is reflected in the way family members interact verbally in terms of reciprocity. Who asks, who receives, and who is refused? Schieffelin concluded that brothers could always ask their sisters for food or assistance, but sisters could not make the same demands on their brothers. Men also display the exuberant self; they are "hard" and assertive. They, however also appeal, especially to women. No matter how they ask, they expect to be given to and easily "felt owed." Women are most often in the giving position. Finally men display a greater range of emotions and are generally more likely to have tantrums, angry rituals, and spontaneous weeping. Women are more steady in everyday and formal situations.

In her readable and insightful ethnography, Schieffelin shows her reader how studying the way mothers teach their children to use language and how they interact with each other can reveal the important themes and values in Kaluli society. These are autonomy versus interdependence, authority, and the importance of gender and reciprocity. Focusing on the connections between language and socialization, the stuff of everyday life, can give us more accurate insights into another culture, even our own.

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KALULI MEN DISPLAY A GREATER RANGE OF EMOTIONS THAN WOMEN

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FORGET THE OLD LABELS: HERE'S A NEW WAY TO LOOK AT RACE

by Boyce Rensberger

You're not a racist. You know that deep down inside, all people are pretty much the same, no matter what color their skin or what shape their eyelids.

But you are curious about differences among these groups that we call races. Everybody is.

Why do most people from Europe have pale skin? Why is the hair of Africans tightly curled? Why do most Africans and most Europeans--and their descendants in this country--have eyes that are shaped alike but are so different from an Asian's eyes. Or maybe you wonder why people come in so many colors and facial forms in the first place. And many people wonder whether the differences are more than skin deep.

These are honest, scientifically worthy questions. In fact, scientists have tried for centuries to answer them. After discarding many mistakes in their interpretations, today's researchers generally agree on three major discoveries.

1. There are many more differences among people than the obvious ones such as skin color and facial form. Dozens of other variations have been found that are more than skin deep. We'll look at some of them shortly.

2. These differences have been good for the human species. If we were not so diverse, we would not

be such an evolutionary success. For example, without the protection of dark skin, our ancestors in Africa could not have survived the strong tropical sun.

And when some of those ancestors migrated to the climate of northern Europe, where there is less sunlight, they could not have survived unless they lost most of their skin color. We'll get back to this too.

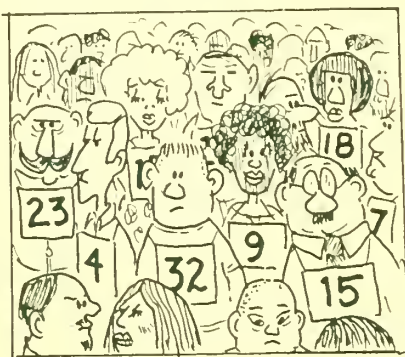


3. The third conclusion is probably the hardest to understand--races don't really exist, at least not outside our imaginations. We all use the word "race" as if it meant something specific and clear-cut. We talk and act as if blacks, whites and others belong to different groups that developed naturally long ago. But, according to most anthropologists today, that isn't true. They say races are mostly arbitrary categories invented by people to fit a misunderstanding about how human beings evolved.

A few centuries ago, European scientists claimed that races were natural divisions of the human species. Some even argued that races represented a series of evolutionary stages, some "more advanced" than others. The old-time researchers knew of very few differences among various peoples and did not fully understand how evolution works. In fact, the concept of race was developed long before 1859, when Charles Darwin, the English naturalist, published his discoveries about evolution.

In 1735, Carl von Linne, the Swedish naturalist better known as Linnaeus, said there were four races. Over the years dozens of other classifications have been proposed, some arguing that there are as many as 31 or even 37 races.

Today, anthropologists are aware of many differences that were never noticed before and that don't correspond to racial categories. More important, the more that researchers study people worldwide, the more they realize that if they take into account all the hidden differences, they get a very different picture of what is similar or dissimilar among groups. If you consider each feature by itself, you see that a person of one race can be more like a person of another race than he or she is like someone of their own race.



Take blood for example. African blacks may be any of the four major blood types: A, B, O and AB. The same is true of European whites and of Asiatic peoples. If you're a type O, your blood is more closely related to that of any other type O person--regardless of race--than it is to a type B or type A of your own race. If you need a blood transfusion, you shouldn't care whether the donor's skin color is like

yours; you want someone with blood like yours. The same is true of organ transplants. Your closest genetic match for a donated kidney, for example, could easily be somebody of another "race."

The same race-blind relationships are true of many physical factors, from the critical to the trivial. Take ear wax, which comes in two kinds. One is wet and sticky; the other is dry and crumbly. The vast majority of Africans and Europeans have the same kind--wet and sticky--while the vast majority of Asians have the dry kind.



We can also look at racial differences from another angle. Lots of people think that skin color is a major factor in pigeonholing people in racial groups. Yes, it is true that most Africans and their descendants have skin that is darker than that of most Europeans and their descendants. But millions of people in India, classified by some anthropologists as members of the "Caucasoid," or "white," race, have darker skin than most Americans who call themselves black. Does their black skin mean that they should be grouped with black Africans? Or does their straight hair mean they should be grouped with Europeans?

Also, many "Negroid" people living in sub-Saharan Africa today (such as the !Kung San, or Bushmen) have skin no darker than that of many Mediterranean people such as the Spaniards, Italians, and Greeks. And there are people in New Guinea who are as black and woolly-haired as any African but have no known ancestral links to Africa.

And here's another angle to think about. If you want to classify all black Africans in one group, how do you deal with the fact that within Africa live

several kinds of people with much more dramatic differences than skin color. There are the world's smallest people, the Mbuti pygmies of Zaire who average 4-foot-7 and whose size is very similar to that of a group in the Philippines called the Negritos. And there are the world's tallest, the Tutsi of Rwanda, who average 6-foot-1--close to the average for the very pale-skinned Scandinavian peoples. The two African ethnic groups live just a few hundred miles apart but have remained separate. In size, they more closely resemble other ethnic groups who live very far away.

Among Africans are still other kinds of diversity that are more than skin deep. Such differences within the usual broad racial groups have led most anthropologists to say it makes no sense to think that races are biological categories. You can classify specific traits but not people who are bundles of different combinations of traits.

Sherwood L. Washburn, an anthropologist at the University of California at Berkeley, has long questioned the usefulness of racial classification. "Since races are open systems which are integrating, the number of races will depend on the purpose of the classification," he says. "I think we should require people who propose a classification of races to state in the first place why they wish to divide the human species."

The overwhelming conclusion of anthropologists, in short, is that no physical feature distinguishes any race. Not even a combination of traits will do the job.

SO HOW COME PEOPLE ARE DIFFERENT?

Biologists say most racial differences arose as a result of a process called natural selection. This is the phenomenon that Darwin discovered in the 19th century, and it explains a lot about how evolution happens. In a nutshell, it means that if a mutation--a change in a person's genes--produces a useful feature, the person with that change is more likely to be healthier, live longer and, most important for

evolution, have more children. Since the change is in the genes, the children inherit it. Because the change gives each person an advantage in survival, eventually those with it will outnumber those without it.

Skin color provides an excellent example. People whose ancestors have lived a long time in the tropics have dark skin. And the farther people lived from the equator, the lighter their skin. Even southern Europeans usually are darker than northern Europeans. In Africa, the darkest skins are near the equator, but at the north and south ends of the continent, the skins are lighter. In southern India, many people are as dark as the blackest Africans while northern Indians are about as light as southern Europeans. Whatever the skin color, it is all due to different amounts of a dark brown substance called melanin.

This north-south spectrum has evolved in response to the sun's intensity in local regions. Too much sun causes sunburn and skin cancer. Too little deprives the body of vitamin D. Without this vitamin, bones grow crooked, resulting in a disease called rickets. In the tropics, the sun is so strong that enough gets through dark skin to make all the vitamin D a person needs.

When dark-skinned people first migrated out of Africa and into northern climates, they may well have suffered rickets, which also can deform the pelvis, making childbirth dangerous or impossible. But because skin color can vary slightly even within a family, lighter-skinned children would be less affected. As a result they would probably have more children than their darker relatives. And those children would be even more likely to have lighter-skinned children of their own.

After many generations, the natural effect of the combination of dark skin and low sunlight would select for people who had lost more and more of their original color. This is Darwin's natural selection at work.

Only a few external differences other than color appear to provide a survival advantage. The strongest case can be made for nose shape. People native to colder or drier climates tend to have longer, more beak-shaped noses than those living in hot and humid regions. This is because the nose's job is to warm and humidify air before it reaches the sensitive lungs. The longer the air's path to the lungs, the warmer and more humid the air.



Migration is a key player in the evolutionary drama. Geneticists know that if all members of a species stay in one breeding population, all will stay the same or change in the same ways. But if some members move away and become isolated from the rest of the species, the two groups evolve in different ways. Any mutation in one group eventually can change it forever but can have no effect on the other group--as long as the two don't interbreed.

Human beings are very mobile. They like to pull up stakes and move long distances before settling down. Many times the migratory group loses all contact with the old folks at home. This is why hundreds of different languages have developed. If our ancestors had stayed in touch over thousands of years, we'd probably all speak the same language today. Another result of losing touch is reproductive isolation, which means that any changes in the genes cannot be transmitted to another group.

The fact that people of so many different physical types do exist is proof of long periods of reproductive isolation.

SEXUAL SELECTION PLAYS A ROLE

Aside from the examples above, there is little evidence that any other visible differences among people have any practical advantage. For example, nobody knows why Asiatic people have that special form of upper eyelid or flatter facial profiles.

The thin lips of northern Europeans and many Asians have no known advantage over the full lips of many Africans and Middle Eastern peoples. Why do middle-aged white men go bald so much more often than men of other backgrounds? Why does the skin of the !Kung San, or Bushmen, wrinkle so heavily in middle age when that of most other Africans resists wrinkling far better than that of Europeans?

One possible explanation is another evolutionary process that Darwin also discovered--sexual selection. This differs from natural selection, in which the environment chooses who will survive. In sexual selection, the choice is up to the prospective mate.

In simple terms, ugly persons will be less likely to find mates and pass on their genes than will beautiful people. And, of course the definition of beauty varies from culture to culture. Consider the fact that white Europeans and their descendants are usually so much hairier than Africans or Asians. Some anthropologists have suggested that this evolved because white women, like female lions, preferred males with imposing facial fur.

There is a third way that differences can appear in isolated groups--especially traits that are neither good nor bad for a person. Imagine a family with straight finger prints. If the children marry people with curved finger prints, their new genes (offering no advantage) might never become common, or might even disappear. But if this one family strikes out on its own and founds a new settlement in some

remote region, straight finger prints eventually might be the rule among all the family's descendants. This kind of evolution is called genetic drift.

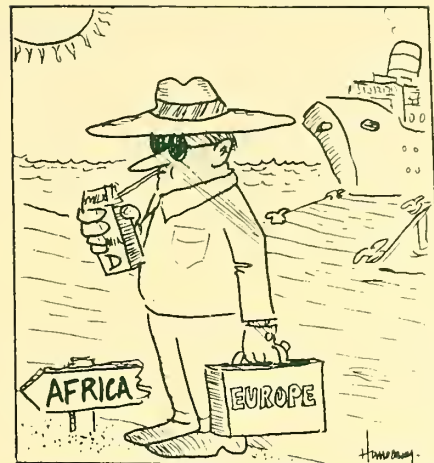
Although reproductive isolation is essential to produce differences, there is plenty of evidence that no group of humans has stayed isolated for more than a few thousand years. For one thing, a very long separation between two groups allows their genes to become so different that the groups no longer can interbreed. The fact that all peoples can intermarry and have healthy children proves that we all remain members of the same species. Our differences are trivial in a biological sense. In fact, geneticists have estimated that the variations in genetic makeup that account for racial differences occupy only about 0.01 percent of our genes.

SO, WERE THERE EVER PURE RACES?

Until the mid-20th century, most researchers assumed that so-called pure races once existed. Those early thinkers had great trouble figuring out who belonged in which race and decided that was simply because migrations and intermarriage had mixed up, or blended, the once-distinct traits. Today, most anthropologists hold that pure races never existed. They think that human beings have always been migrating and intermarrying, spreading new genes worldwide.

Genes useful in all parts of the world would spread quickly--those, for example, that might improve the immune system. Surely the fastest to spread were the genes that improved the brain. In fact, anthropologists who study the earliest human beings agree that a fully modern brain evolved long before any of today's races came into existence.

Genes useful only in some areas would tend not to become common when they were carried to other places. Dark skin, for example, is not an advantage in cold climates. Light skin is a serious disadvantage in tropical climates. So skin color genes could not flow far and persist, at least not until the age of milk fortified with vitamin D, large hats, and long sleeves.



Still, many genes that had no significant good or bad effects--such as those of blood type or ear wax, can spread far and did. But few have come to 100 percent prevalence anywhere. In fact, the varying degrees of prevalence of certain traits provides a clue to the kind of race mixing and genetic blending that has always been part of human history.

Look at the three maps with this article. They plot the Old World distribution of three major genetically controlled features: type-A blood and two supposed markers of race--hair form and skin color. The traits are largely independent of one another. No combination of traits can be offered as defining any race.

The bottom line, anthropologists agree, is that the science does not support the idea of races as natural units, now or in the past. You cannot pick just one or even a few traits and claim that they define a biological category. People have tried to do this using the most visible features such as skin color, facial form, but have ignored all unseen genetic variability, which doesn't fit the visible pattern.

Perhaps if humans were blind to everything but ear wax, we would say there are two races. If all that mattered was ABO bloodtype, we would argue that there are four races.

SO WHAT?

After the many misunderstandings of the past, the great lesson of anthropology, biology and genetics

is that all people are the same in the essentials but are highly diverse in a few things. These differences have arisen not because there are fundamentally different kinds of people but simply because we are a restless, curious, hopeful migratory species whose intelligence has allowed us to make a good living in almost every environment on Earth.

Human beings are more mobile than ever, and genes are flowing farther and more widely than ever. In many parts of the world this is blending once-diverse features. But if the past is a guide, no amount of blending is likely to take away the diversity that has made the human species so successful and that surely will prove useful as the environment on Earth changes in centuries ahead.

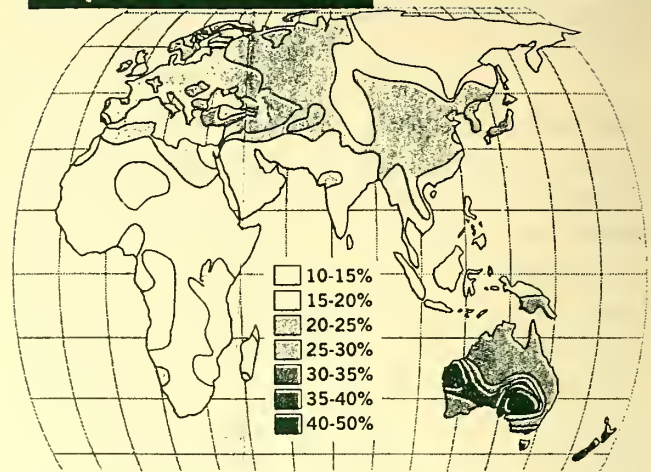
SET UP YOUR OWN RACIAL CLASSIFICATION

If there really are races, shouldn't you be able to see them in maps like these? The maps show the distribution of three genetic traits, all in people whose ancestors have lived in each area since ancient times. Where would you draw the racial boundaries?

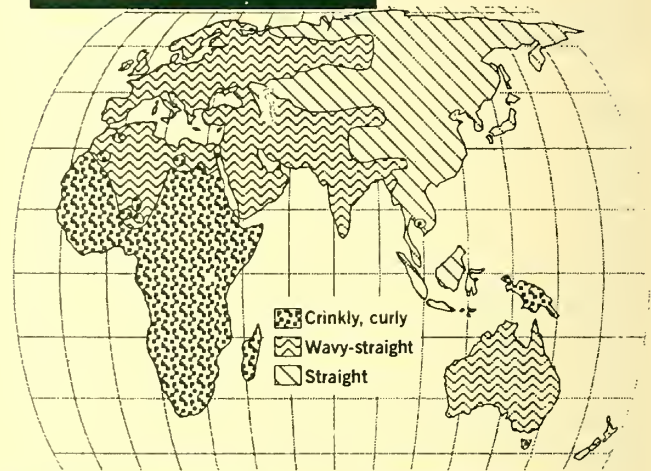
The fact is that these and all other variable traits are distributed independently. In other words, just because you have one trait, it has nothing to do with whether you have another one. Consider the aborigines of Australia. Their hair form (wavy-straight) is like that of European whites. Their skin color is like that of African blacks. And their prevalence of blood type A resembles that of a huge swath of the world from Europe to southern Asia.

You might think it would help to consider additional features such as the shapes of noses, lips and eyes. But it doesn't. They, too, are independently distributed and maps showing their distribution would be even more confusing.

FREQUENCY OF BLOOD TYPE 'A'

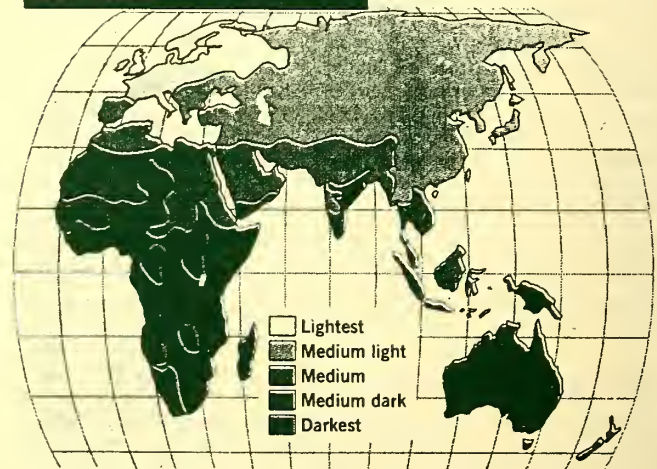


HAIR FORM



BY RICHARD FURNO-THE WASHINGTON POST

SKIN COLOR



SOURCE: "The Kinds of Mankind," by Morton Klass and Hal Hellman

RACE AND INTELLIGENCE

Arguments that one human population is intellectually superior to another are fairly new in human history, dating mainly from the time of massive enslavement of Africans. The idea of using Africans in the New World, however, grew out of the racist assumption that they were superior to the American Indians. Bartolome de las Casas, a Spanish priest of the 1500s, argued that Indians being enslaved by the Spanish conquerors were not up to the "civilized" work demanded of them in farming, mining and industry. He argued that the colonial rulers should import more advanced peoples such as Africans.

Much later, when some people challenged the morality of slavery, defenders claimed that Africans were not fully human, especially in intellect.

In modern times, researchers have made many tests of the mental powers of all groups of people and repeatedly found that if they test people of equivalent social and educational background, they find no significant differences. In 1961, the council of the American Anthropological Association ruled unanimously that it knew of no evidence that any population was less capable than any other of participating fully in modern, complex society. Further studies have reinforced that conclusion. ♦

If you want to know more, here are three good books:

Human Variation: Races, Types and Ethnic Groups. 3rd ed. by Stephen Molnar. Prentice Hall, 1992. (A detailed look at what science knows about variation among humans.)

The Mismeasure of Man by Stephen Jay Gould. Norton, 1981. (A highly readable treatment of science's early misadventures, some brutal and tragic, with the concept of race.)

The Evolution of Racism by Pat Shipman. Simon & Schuster, 1994. (A history of race theory and racism from Darwin's day through the ill-conceived eugenics movement and Nazism to the modern view.)



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Boyce Rensberger is a science writer for The Washington Post.

About Boyce Rensberger:

Boyce Rensberger is the creator and editor of the Horizon Section of the *Washington Post*, published the second Wednesday of each month. He chose the provocative topic of race as the first Horizon article, reprinted here. His research into race was generated out of curiosity, and a belief that it was time to address the issue "for which there is a lot of interest and misunderstanding."

Rensberger, who has an undergraduate degree in zoology, has been a science writer for newspapers and magazines for the past thirty years. Prior to coming to *The Washington Post* ten years ago, Rensberger was science editor of *Science* 1980 from 1981-84 and for eight years a writer for the *New York Times*. He finds his stories by reading scientific journals and magazines and by attending professional meetings to learn about new developments in the sciences.

Rensberger has long been interested in anthropology, particularly human evolution and physical anthropology. In the 1970s, his interest piqued while spending a year in East Africa at sites well-known for evidence of early human activity, namely Olduvai Gorge and Koobi Fora, working with scientists such as Donald Johanson, F. Clark Howell, and various members of the Leakey family.

1996 SUMMER FIELDWORK OPPORTUNITIES

A regular feature of the *AnthroNotes* winter issue, this article suggests ways teachers and students can become more personally involved in the field of anthropology. This summer, opportunities exist to work alongside archaeologists in China to investigate early human sites, to excavate 13th century Pueblo villages in the Southwest, to research tourism in Costa Rica while living with a local family, or to learn about the arts and crafts of West Africa. But don't ignore the opportunities in your own backyard; we explain how you can learn about them too. Let us know about your fieldwork experience and if you would recommend it to other readers.

ORGANIZATIONS TO CONTACT

Anthropology departments at local universities and colleges, state historic preservation offices, and state archaeological societies often organize local archaeological excavations and frequently accept volunteers with no previous fieldwork experience. The Archaeological Institute of America (AIA) offers a listing of state archeologists as part of its yearly field school listing for the U.S. and abroad. This publication includes over 250 opportunities with all information about costs, deadlines, age requirements, and archaeological sites to be excavated and analyzed for each field school. The cost for the *Archaeological Fieldwork Opportunities Bulletin*, including shipping and handling, is \$9.00 for members and \$11.00 for non-members, plus \$4 for shipping and handling. Send orders and make checks payable to: Kendall-Hunt Publishing Co., Order Department, 4050 Westmark Drive, Dubuque, IA 52002; you may also charge your order to Visa or Mastercard by calling (800) 228-0810 or (319) 589-1000.

Archaeology magazine, published by the AIA, features an archaeology travel guide to sites open to the public in the Old World (March/April issue) and the New World (May/June issue).

Several organizations offer volunteer public participation in worldwide research expeditions. Many of the organizations listed below are non-profit, and participation fees may be treated as tax-deductible contributions.

University Research Expeditions Program

University of California

2223 Fulton, 4th Floor

Berkeley, CA 94720

(510) 642-6586

Over 25 programs, including several archaeological projects, are open to the general public. No background or prior experience is necessary.

Earthwatch

680 Mount Auburn Street, Box 403

Watertown, MA 02272

(800) 776-0188; (617) 926-8200

Scholarships are available for teachers.

Foundation for Field Research

P.O. Box 2010

Alpine, CA 91903

or

Dept. P., P.O. Box 771

St. George's, Grenada (West Indies)

(809) 440-8854

SELECTED FIELD SCHOOLS

Abbé Museum Field School Experiences are concentrating on a large shell midden coastal site, occupied 4,000 year old, on Frenchman's Bay. The site, originally excavated in the 1940s, contains an abundance of stone tools and pottery and faunal remains. Write: Abbé Museum, P.O. Box 286, Bar Harbor, ME 04609, (207) 288-3519.

George Washington University is offering three field programs. 1) Paleoanthropology in northern China. Zhoukoudian is the Lower to Middle Paleolithic site that contains the remains of individuals that inhabited the area between 500,000 and 250,000 years ago, and where Peking Man was found. In cooperation with the Institute of Vertebrate Paleontology and Paleoanthropology,

Academia Sinica, the University will set up a center for teaching and research. Two field sessions are scheduled: June 1-26 and June 26-July 20. In addition to excavating, participants will visit the cities of Beijing and Xian and important sights such as the Great Wall, the Palace Museum, and the Mausoleum of Qin Shi Huang. Write: Xiang-Quing Shao, Department of Anthropology, George Washington University, Washington, DC 20052, (202) 994-6075, anth@gwis2.circ.gwu.edu.

2) Prehistoric Archaeology in Catacamas, Honduras at Rio Talgua caves, Preclassic, pre-Maya occupation and ossuary sites, June 8-29. Non-credit volunteer positions also available. Write to Dr. James Brady at the above address. 3) Historical Archaeology in Alexandria, Virginia (17th century to the present), May 21 to June 1. Write: Dr. Pamela Cressey, Alexandria Archaeology, 105 N. Union St., Alexandria, VA 22314, (703) 838-4399, Email alexarch@gwis2.circ.gwu.edu.

Prehistoric Archaeology at Rudd Creek, Arizona is the site of Pueblo III villages dating AD 1200-1300. This project seeks to understand the social, economic, and political organization that characterized 13th century towns along the upper Little Colorado River, and how these towns interacted with contemporaneous Pueblo (Hopi and Zuni) and Mogollon populations. Five week field school, June 5 through July 7. Application deadline, April 5. Write: Dr. Todd Howell, Department of Anthropology, Box 872402, Arizona State University, Tempe, AZ 85287-2402, (602) 965-6213, Fax (602) 965-7671; Todd.Howell@asu.edu.

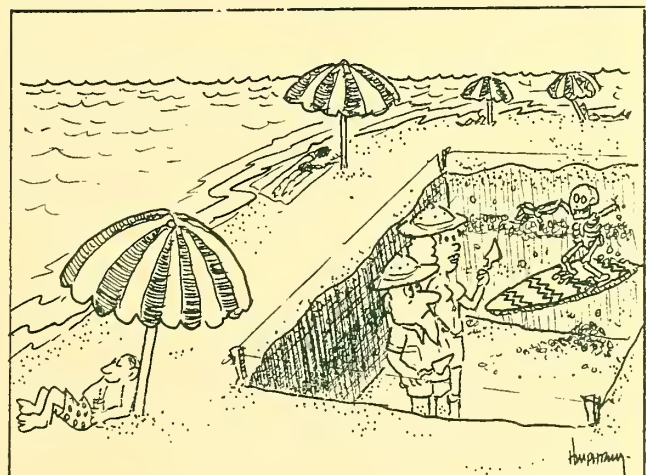
Crow Canyon Archaeological Center is a non-profit institution specializing in Southwestern archaeological research and education. Programs for middle and high school students and adults throughout the year introduce participants to archaeological field methods, laboratory techniques, and excavation. Write or call: Crow Canyon Archaeological Center, 23390 County Road K, Cortez, CO 81321; (800) 422-8975 or (303) 565-8975.

Center for American Archeology, Kampsville Archeological Center conducts one to five week

field schools for adults and high school students, June 2 through July 6. A field school with Individualized Mentored Research for high school juniors and seniors will be held July 17 through August 17. Volunteers can participate in site opening and closing excavations. Special Educators' Outreach weeks are July 28 through August 17. Scholarships are available for American Indian students. Write: Harry Murphy or Brenda Nord, Education Program, Center for American Archeology, PO Box 366, Kampsville, IL 62053-0366; or call (618) 653-4316.

Summer Abroad through World Learning, Inc., The U.S. Experiment in International Living, offers students opportunities to learn about another culture through homestay, language-study, and ecologically-focused programs. Write: World Learning, Inc., The U.S. Experiment in International Living, P.O. Box 676, Kipling Rd., Brattleboro, VT 05302-0676; (800) 345-2929 or (802) 258-3173.

Summer Ethnographic Field School in Costa Rica, May 8 to June 11, will investigate the problems of tourism development in towns and villages near national parks and beaches in western Costa Rica. Students will live with Costa Rican families. Prerequisites are six credit hours of anthropology and at least the equivalent of two semesters of college Spanish. Write: Dr. Tim Wallace, Costa Rica Field School, Department of Sociology & Anthropology, Box 8107, North Carolina State University, Raleigh, NC 27695-8107; (919) 515-2491 (office) or (919) 781-8655 (home); Fax (919) 515-2610.



Drew University in West Africa offers a comprehensive study of West African art and culture in Cote d'Ivoire (July 20 through August 17). In the Côte d'Ivoire, students will learn through apprenticeships about West African arts and crafts. Undergraduate or graduate credit may be earned. Write: Dr. Phil Peek, Department of Anthropology, Drew University, Madison, NJ 07940-4036; (201) 408-3013/3383.

Picuris Pueblo in the Sangre de Cristo Mountains, New Mexico, is the focus of an ethnographic field school, July 25 through August 15. In addition to instruction on southwest cultures and in field methods, students will live with Pueblo families and participate in village life, including pottery making, adobe construction, and feast day. Write: Dr. Diane Z. Wilhelm, Middlesex County College, 155 Mill Road, Box 3050, Edison, NJ 08818-3050; or call (908) 548-6000 ext. 3099.

The Yucatec Maya Summer Institute offers an intensive course in the Yucatec Maya language (June 10-July 19) that includes all or part of the following: classroom instruction, a hieroglyphics workshop, and field study in Yucatan, Mexico. Deadline for application is May 3. Write: Sharon S. Mújica, the Yucatec Maya Summer Institute, Duke-UNC Program in Latin American Studies, 223 E. Franklin St., CB 3205, Chapel Hill, NC 27599, (919) 962-2414, FAX (919) 962-0398, Email: mujica.ham@mhs.unc.edu.

Northwestern University's Ethnographic Field School (June 19 through August 12) is an opportunity to learn about the Navajo or Hispanic cultures of New Mexico and Arizona by designing independent research projects of the student's own choice. Write or call: Professor Oswald Werner, Department of Anthropology, Northwestern University, Evanston, IL 60208; (708) 491-5402 or (708) 328-4012, evenings.

Human Origins and Prehistory in Kenya: The Koobi Fora Field School (June 4 to July 15; July 21 to August 31), offered by Harvard University Summer School and the National Museums of Kenya,

introduces the wealth of paleoanthropological evidence at Koobi Fora and field methods in early human research. Write or call: Dr. Harry V. Merrick, Koobi Fora Field School, Harvard Summer School, 51 Brattle Street, Cambridge, MA 02138-3722; (203) 481-0674 or (617) 495-2921.

Salt Center for Documentary Field Studies sponsors research on Maine life and Maine people. For example, participants in the past have documented tradition and change in Maine among American Indians, fishermen, store keepers, mill workers, farmers, and artisans. Students choose their own projects based on their background and experience, and can receive 12 credits through the University of Maine. There is also an opportunity for students to have their research published by the Salt Center through the photography and writing program (June 10 through August 2). Write Salt Center for Documentary Field Studies, 19 Pine Street, P.O. Box 4077, Portland, ME 04101; or call (207) 761-0660.

Jefferson Patterson Park and Museum Public Archaeology Program focuses on 17th century colonial sites at the Park. Excavations will take place from May 22 through July 18; advanced registration required. No previous experience required. Contact Kirsti Uunila at (410) 586-8555 or Ed Chaney at (410) 586-8554, or write: Jefferson Patterson Park and Museum, 10515 Mackall Rd., St. Leonard, MD 20685.

Smithsonian Study Tours and Seminars is offering several American Indian culture tours. Write: Smithsonian Study Tours and Seminars, 1100 Jefferson Dr., S.W., MRC 702, Washington, DC 20560.

Discovery Passages offers tours of Native America, with a focus this year on the Southwest and the Plains. Write: Discovery Passages, 1161 Elk Trail, Box 630, Prescott, AZ 86303; (520) 717-0519.

DOING ARCHAEOLOGY: MAKING DREAMS COME TRUE

by Bonnie Christensen

One evening in the archaeology lab on the campus of the University of Wisconsin-La Crosse, a group of teachers listen to an introduction on identifying and reporting new archaeological sites, but the intense face of a high school student stands out. The guest of one of the precollegiate teachers attending the "Archaeology for Teachers" course, Ryan has a life-long dream--to become an archaeologist. His excitement shows as he enthusiastically asks questions of the archaeologist, who identifies and describes the projectile points and artifacts Ryan and others have brought to the class.

For Ryan, that evening sorting through his treasured collection of arrowheads gleaned from the fields of his family's farm, will change and challenge the rest of his life. Since then, Ryan has graduated from high school, is pursuing a college degree in archaeology, and is employed in the summer with the archaeological field crew at the University.

Not all stories that have roots in the Mississippi Valley Archaeology Center's (MVAC) Archaeology in Education Program are as dramatic as Ryan's. But, turning young students and their teachers on

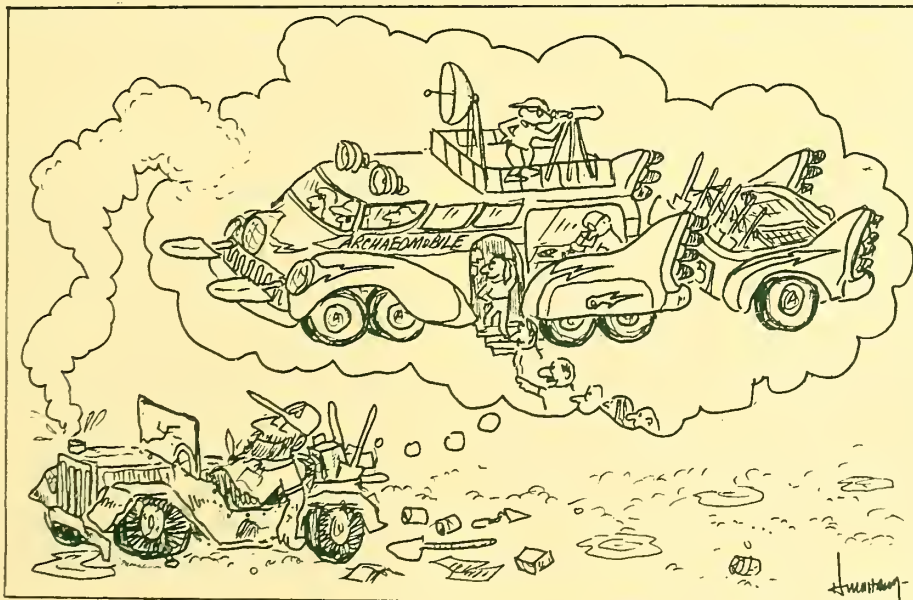
to learning about archaeology, cultivating and nurturing an interest in the science of archaeology and the history of the area's past people, and developing an awareness of and the desire to preserve cultural resources underscore MVAC's unique educational outreach mission and program.

Mississippi Valley Archaeology Center

Mississippi Valley Archaeology Center, a private non-profit organization located at the University of Wisconsin-La Crosse, conducts research on the upper Mississippi River region and educates the public about the science of archaeology and the early people of the region. In addition to its reputation for high standards in archaeological research, MVAC now offers a variety of ways for the public to become involved in archaeology. These include short lectures, numerous course offerings, summer camps for youth of all ages (kindergarten through high school), family events, laboratory opportunities, artifact identification days, field trips, excavation experience in field schools, and participation in actual archaeological research alongside professional archaeologists.

MVAC's Archaeology in Education Program

In 1990 MVAC began a concentrated effort towards archaeology education for precollegiate



teachers and students and, at that time, created an Archaeology in Education Program. Initially, offering speakers for classroom presentations and civic groups, the program included a collection of books and audio visual materials that teachers and the general public could access. Bringing together that assemblage of materials illustrated just how limited, outdated, and/or scientifically inaccurate much of the area's existing resource base was, as offered by area libraries and school media resource centers.

Today the Archaeology in Education Program offers various courses, information booths at conferences around the state, in-service workshops, field trips and lectures through which teachers are introduced to the science of archaeology and the pre-European and post-Contact history of the area. An "Archaeology for Teachers" course is offered for undergraduate or graduate credit. Many of MVAC's other offerings (workshops and field trips) provide clock hours that can be used by teachers towards state relicensing. Field schools and laboratory classes afford the ultimate hands-on opportunity for teachers to participate in actual scientific research and at the same time offer concepts they can use to introduce their students to all curricula areas using archaeology as a thematic focus.

MVAC's goal for precollegiate educators is not just to enlighten them about archaeology but to have instructors implement lessons on archaeology in their classroom year after year. To accomplish this goal, the Center believes that training teachers and turning them on to archaeology is not enough. It is imperative to support instructors once they return to the classroom. The Archaeology in Education program offers a variety of support services including two Wisconsin-licensed precollegiate instructors with extensive training in archaeology, resource materials, presentations, and a newsletter. The staff is available to help teachers find resources, answer content questions and provide whatever support instructors need to implement archaeology in their classroom.

Resource materials for use in the classroom include an extensive array of: 1) resource boxes that contain a variety of materials---books, videos, bulletin boards; 2) book boxes of various types that provide multiple copies of a single book title along with supporting materials; and 3) activity boxes that contain all the materials for an instructor to conduct an exciting hands-on activity session in the classroom. Materials are not all specifically based on archaeology and topics are as diverse as: Native American Art and Music, The Fur Trade Era, Rock Art, and Native American Folklore. With this assortment, teachers can put up a bulletin board, conduct a lesson or a complete unit, or create a learning center. Students can touch a traditional wooden flute or recovered artifacts, wear an authentic tinkle-cone or jingle dress, grind corn using a mano and metate, and in dozens of other ways explore how various people lived, adapted to their past environments, and continue today to preserve many of their traditions. Materials are loaned for a fee for a specified period of time; these materials are often booked months, even semesters in advance.

The Archaeology in Education Program provides classroom presentations ranging from large group lecture/slide shows to small group hands-on activities. Several presentations are available for teachers to choose from, or activities can be planned to fit individual needs. There are also lab tours, field trips to archaeological sites or excavations, and opportunities for students to participate in specially scheduled archaeological excavations and laboratory activities.

The newsletter, distributed four times throughout the school year, includes content information, lesson plans (usually designed by instructors), upcoming events, book reviews, information on sites to visit, and columns recognizing instructors for their participation in archaeology.

Making Dreams Come True

For many folks of all ages, MVAC's educational program offerings broaden their knowledge and

interest not only in archaeology, but also in many other inter-related fields. For a group of twenty squirming third through fifth grade students, flashlights in hand, huddled under a low ceiling of the dark reaches of a damp cave observing and learning about pre-European rock art panels, it is hard to determine which one, if any of them, will



grow up to be an archaeologist, a museum curator, a geoarchaeologist, a photographer, a historian, a cartographer or a technical illustrator. What is certain is the enthusiasm of these selected youngsters, part of a pilot spiral-curriculum project at La Crosse's North Woods Elementary School, who returned to their classrooms to report and to teach their fellow classmates about their archaeology experiences.

For a group of fourth graders, from La Crosse's Southern Bluffs Elementary, their experiences included walking plowed fields to search for cultural artifacts left from not only pre-European occupants but also from the small Mormon community that inhabited the coulee over a century ago. Besides contributing information to a current research project, the experience resulted in an exhibit in their school's media center and knowledge and memories that will last for their lifetimes. Similarly, almost twenty youngsters turned out on a Saturday morning to participate in an archaeological survey of a city park to determine whether or not valuable archaeological resources would be jeopardized by the building of a playground. Their supervised survey concluded that the playground could be safely built and at the same time gave these youngsters hands-on insight and exposure to the

archaeological process. The experience also gave them a notable distinction and pride in the development of their community.

For one retired high school teacher, Don, a lifelong dream of becoming involved in archaeology has resulted in his voluntary participation in successive summer field schools. There, Don inspires other teachers and continues to mentor to the high school students. A group of at-risk middle and high school students from around the region will long remember their week-long participation in an excavation at the site of an early fur-trade post (Perrot State Park, Trempealeau, WI) and will remember Don's guiding hand as they carefully shovel tested for the first time. Another high school teacher, Bruce, has completely re-designed his art curriculum to include projects inspired by his archaeological experiences. Still another teacher, Le Vern, who once had only a fascination in archaeology, now enjoys giving flintknapping demonstrations throughout the area and is of tremendous value to the state's regional archaeologist, having located and documented twenty-one previously unrecorded sites just within the past year. A former housewife with college-aged children of her own, Kathleen beams with joy over her recently completed undergraduate degree in archaeology from the University of Wisconsin-La Crosse and her part-time job at Mississippi Valley Archaeology Center's laboratory, where she helps supervise undergraduate students and catalogs and curates artifacts. "Every morning, I get up and say to myself, I'm living a dream," Kathleen tells visitors to the lab.

For Ryan, Don, Bruce, Le Vern, and Kathleen and for, indeed, thousands of people throughout western Wisconsin, eastern Minnesota and northeast Iowa, MVAC's Archaeology in Education Program has offered far more than satisfaction for a short-lived whim. For many, it has changed their lives. Because of the program's focus on educators and youth, even if the program ended today, its effects would continue to impact irreplaceable cultural resources, attitudes toward preservation, and without question, the shaping of public awareness and policy for years to come.

Fortunately, with respect to the future of the program, there is no intention of ending any time soon and, in fact, over the years thoughtful and intelligent growth has been conservatively approached and implemented as funding has increased. A recent National Endowment for the Humanities matching grant is being used to encourage contributions that will increase an endowment fund that partially supports the center's public education program. To use an archaeological phrase, MVAC believes that its public education efforts have just "skimmed the surface." Future dreams and plans include the beginnings of a model statewide network to serve archaeology education throughout the region. With enough funding and human resources, a mobile van housing a mini museum and archaeology classroom would better service rural areas; an in-laboratory classroom; an internet link; an on-campus, hands-on "model" excavation and much more could be done.

When Dr. James P. Gallagher, founder and executive director of the MVAC organization, arrived in La Crosse in 1977, virtually no formal archaeological research had been done in the area and skeptics scoffed at its importance. From a staff of one with an obsolete, donated computer to a staff of ten archaeologists, two educators and seasonal crews that can add an additional twenty to the staff, MVAC has indeed proven in many ways that for many, dreams can come true. The University of Wisconsin- La Crosse is now included in the limited number of universities in the nation that offer an undergraduate program in archaeology, and MVAC's Archaeology in Education Program is unique in its specific focus on involving and providing continual support to teachers and precollegiate students.

Starting Your Own Archaeology Education Program

The beginnings of MVAC'S Archaeology in Education Program in 1990 were the result of a desire to create more effective ways to work with the precollegiate audience that the Center was often asked to address. We created hands-on activities

that actively involved students in our presentations. MVAC found that classrooms were not always prepared for the presentations, so a library of books and teacher guides was gathered for instructors to use with their students before and after MVAC's presentations. Teachers, however, found visiting the library inconvenient and researching references time-consuming. We, therefore, combined existing materials and purchased and formatted complementary resources to create our first resource boxes to circulate throughout the schools.

Teachers wanted more background information and MVAC created the "Archaeology for Teachers Class." MVAC's "Archaeology Field School for Teachers" was introduced because teachers wanted to participate in field excavations but also wanted credit for relicensing and to help them move up on their pay scales. Because teachers requested information on interrelated topics and wanted activities that were not as time consuming as extended courses, MVAC's series of workshops was implemented.

Looking back, the small changes and additions to MVAC' s Archaeology in Education Program have taken the organization a greater distance and in different directions than originally envisioned in 1990. Central to the growth, however, has always been our desire to listen to the needs of both archaeologists and the precollegiate instructors that MVAC works with, and our wish to make the program mutually beneficial. Just as important are MVAC's long term commitment to teachers and to the dual training of MVAC's educational staff. For those organizations just beginning to design or implement programs of their own, MVAC suggests endeavors that can be realistically accomplished even though, at this time, they might seem small or insignificant. Mississippi Valley Archaeology Center's journey is far from over and the future growth of the educational outreach program will continue to come from those small, seemingly insignificant actions--each individual phone call, each presentation, each report or meeting.

(continued on next page)

If any educator desires to become involved in archaeology, a great way to get started is by contacting the Society for American Archaeology (SAA), and finding out if your state has an Educational Network Coordinator, who can provide information on what educational offerings are available in your state. The SAA's Public Education Committee has available a variety of materials to assist instructors in bringing archaeology into their classroom. SAA offers a Newsletter for instructors three times throughout the school year (\$10), a sampler of lessons on archaeology, and a bibliography of materials on archaeology. For more information on any of these materials, contact: Brigid Brady-de Lambert at (202) 789-8200. For the name of the SAA Educational Network Coordinator in your state, contact Beverly Mitchum at (412) 527-5585.

For more information about Mississippi Valley Archaeology Center and its programs, contact Bonnie Christensen, Director of Public Education, Mississippi Valley Archaeology Center, University of Wisconsin-La Crosse, 1725 State Street, La Crosse, Wisconsin 54601, (608) 785-8454.

Bonnie L. Christensen is Director of Public Education, Mississippi Valley Archaeology Center.

NEW RESOURCE

Archaeology in the Classroom: A Resource Guide for Teachers and Parents describes a wide range of educational materials and resources for introducing children, from kindergarten through high school, to archaeology. This volume is organized into three parts: General Resources (e.g. books, films, magazines, computer games); Resources by Subject Area (e.g. the Americas, Greece, Rome, Africa, Near East); and Supplementary Bibliography. Indexes in the back of the book organize resources by location, grade level, culture, and specialized topics. Lastly, the guide, under Supporting Materials, provides additional useful information such as internet resources, a bibliography for parents and teachers, lists of Society for American Archaeology Education Coordinators, state historic preservation officers and state archaeologists, and affiliated institutions and related organizations. The cost of the publication is \$9 for AIA member, \$10.50 for non-member, plus \$4 for shipping and handling and 50 cents for each additional copy. Write: Kendall-Hunt Publishing Co., Order Dept., 4050 Westmark Dr., Dubuque, IA 52002; (800) 228-0810.



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AnthroNotes has a three part mission:

- 1) to more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
- 2) to help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of curriculum subjects; and
- 3) to create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

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WHAT'S NEW IN EARLY HUMAN EVOLUTION 5 TO 1 MILLION YEARS AGO?

by Alison S. Brooks

Where do we come from? What did our earliest ancestors look like and how did they behave? In the last ten years, a flood of evidence, accumulating at an increasing rate, suggests new answers to these old questions.

Until recently, the hallmarks of "humanness" were thought to have emerged early in human evolution: full bipedalism by 4 million years ago (mya), and, by 2 mya, tools, nuclear families, division of labor by sex, hunting, long periods of childhood and adolescent dependency, and maybe even primitive language. In addition, as recently as five years ago, the family tree itself seemed rather simple and straightforward; the most common model was a tree with only 7 or perhaps 8 species in all, and only one "side branch".

Most of the time, the hominid 'niche' was filled by only one species, except between ca. 2.6 and 1.3 mya, when related species occupied the "side branch". First there was "Lucy" (*Australopithecus afarensis*), from about 3.6 to 2.9 mya. Then, there were more "evolved" australopithecines who came in two varieties: the "gracile" type (*Australopithecus africanus*) and the "robust" type with huge teeth and a bony crest on top of the skull (*Australopithecus robustus*, *A. boisei*, and *A. aethiopicus*). The former group was thought to have evolved into an early form of our own species, *Homo*, while the latter "side branch" became more and more specialized, lived alongside early *Homo* for a while (for perhaps as much as a million years) and then died out. Early *Homo*, in turn, went

through a direct progression from *H. habilis* to *H. erectus*, to *H. sapiens*, marked by increasing brain size and decreasing tooth size. Until about 1 mya, Africa, specifically eastern and southern Africa, was the only home of our ancestors, or so it was thought.

In the last five years, new finds, new dates, and new analyses have turned this simple tree into a complex bush, full of unseen connections, dead ends and mysteries. In addition, the bipedalism, bigger brains, omnivorous diets, tool-making, long period of childhood and learning, indeed the very "humanness" of early humans, have been challenged. The result has been a dramatic upheaval in our conceptions of our past. While the African roots of the family tree have remained firmly fixed, the timing and number of migrations out of that continent have been matters of considerable debate. In addition to the "where," "what," and "when" of human evolution, the "why" has also been challenged. Was it really so dry in Africa 4 mya that our ancestors had to leave the trees for the savanna? Did larger brains evolve so we could make tools?

This review of recent finds will cover five topics:

- the "oldest old" hominids;
- later stages of australopithecine evolution (news from South Africa);
- diversity in the early stages of *Homo*;
- when and why did big brains, tools and long childhoods evolve; and
- when did hominids expand out of Africa (and where did they go).

The Oldest Hominids

New finds from two regions have greatly expanded our knowledge of human evolution "B.L." (before Lucy). The first finds, announced in the fall of 1994, come from the Middle Awash region of Ethiopia, just south of Hadar where Lucy herself was found. Here, Tim White, Berhane Asfaw, and an international team of experts found the scattered and highly fragmentary remains of 16 small creatures with large molar teeth, slightly reduced canines, and a positioning of the skull on the vertebral column (backbone) suggesting upright posture. These features suggested human ancestry and an initial placement in the genus Australopithecus. Enough differences exist, however, for these fossils to be placed in a new species, A. ramidus (or "root" in Afar, the local language). For example, the enamel on the canines and molars is relatively thin, the canines relatively large for hominids, and the molars--especially the lower first deciduous or 'baby' molar--smaller than those of other Australopithecus and more elongated than square in shape. The skull opening for the ear was small as in apes rather than large as in Homo and Australopithecus.

The leader of the geological team, Giday WoldeGabriel, argues that the fossils are close to 4.4 mya, as far back in time from the actual Lucy find (3.18 mya) as Lucy herself was from the original Homo habilis at Olduvai Gorge (1.9 mya). While the teeth relate ramidus clearly to humans, the limb bones remain to be described. In recognition of the dental differences, White et al. recently suggested that the fossils also be placed in a new genus: Ardipithecus ramidus rather than Australopithecus. White has continued to work in the Middle Awash in 1994, 1995 and 1996, and has announced the recovery of at least one and perhaps several partial skeletons of different individuals.

One of the most interesting features of the ramidus find is the apparent **absence** of a savanna environment, at least in the immediate vicinity. The animal bones and plant remains reflect a forest with colobus monkeys, kudus, bats, a primitive bear, and a number of small mammals but relatively few large

savanna mammals such as giraffes, hippos, elephants, rhinos, or primitive horses.

In 1995, palaeontologist Meave Leakey and colleagues also announced a new species from ca. 4.1 mya, this one from several localities around Lake Turkana. Called Australopithecus anamensis (after 'anam' or 'lake' in the Turkana language), it was differentiated from afarensis because the lower canines were larger, the lower front premolars more asymmetrical, the molars more sloping towards their crowns, the chin region a different shape, and the earhole small as in ramidus. On the other hand, it was distinguished from ramidus by the thicker tooth enamel, larger molars and squarer molar shape.

From the asymmetry and angle of the upper part of the shin bone in the region of the knee, however, this form was clearly bipedal. Bipedal knees are quite distinctive because they are shaped so as to allow you to lock ("hyperextend") your knees "straight" while standing and to balance easily over one leg while stepping out with the other. (It was just such a knee joint that led to the finding of Lucy in 1974.) The environment of A. anamensis was less densely forested than that of ramidus, closer to the open savanna envisioned in the earlier scenarios.



NEW STUDIES OF LUCY'S
ANATOMY SUGGEST SHE
WAS ACTUALLY A "HE"

Which of these two led to Australopithecus afarensis and thence to Homo habilis? This may be a moot question, as Australopithecus afarensis and Homo habilis themselves are challenged as single

species stages on the road to modern humans. Is there more than one variant of Lucy, like the multiple species of monkeys and of chimpanzees that co-exist in Africa today? A recent find of a much larger hominid (ca. 24-25% larger than Lucy) at Hadar was interpreted by Kimbel, Johanson and Rak as a male afarensis, but could Lucy's son or brother really have been so different? Or are there two different species of Australopithecus at this time as well? A recent argument by Richmond and Jungers for multiple hominid species in the time range of Lucy suggests that new studies of Lucy's pelvic anatomy indicate that she was actually a "he". Two males of very different sizes would certainly argue for at least two species.



Kimbel et al., however, contend that Lucy's pelvic shape is due to her posture while walking and not to an incorrect determination of her sex. Differences in limb anatomy could mean not different species but simply that the heavier males spent more time on the ground while females spent more time in the trees. Furthermore, they argue, not only do all the fossils attributed to afarensis belong in a single species, but the species lasted unchanged for almost a million years. This conclusion is based on comparisons between a new almost complete skull from Hadar at 3.0 mya and a new frontal (forehead and brow regions) from Belohdelie in the Middle Awash region just south of Hadar, dated to 3.9 mya.

If early australopithecines were not restricted to savanna environments, were they confined to east Africa? A recent paper describes a new fossil from Bahr el Ghazal in the west African country of Chad, more than 1500 miles west of the east African rift valley sites. The fossil mandible is comparable to afarensis but with thinner tooth enamel and other distinctive traits so it could represent another new species. It is dated to around 3.0 to 3.4 mya on the basis of the primitive elephants, horses, pigs, hippos and rhinos found with it. These are interpreted as indicating a mixed forest and woodland with some grassy areas, rather than an open savanna. Further exploration will probably expand both the range of the ancestral hominids and their variety.

News from South Africa

The first australopithecus find in 1924 consisted of a child's face, brain cast, and mandible from the South African site of Taung (Australopithecus africanus). The first recognition of different robust (r) and gracile (g) australopithecine species was also based on South African sites: Sterkfontein (g) and Kromdraai (r) in the 1930s, Makapan (g) and Swartkrans (r) in the 1940s. In recent years, although work continued at these four sites, the main action appeared to have shifted to east Africa, where periodic volcanic eruptions and rift valley sedimentation allowed palaeoanthropologists to find and date actual surfaces where australopithecines had lived. Dates and ancient landscapes were much harder to reconstruct in the cave sites of South Africa. Also, for much of the 1980s and early 1990s, South Africa was isolated from the rest of the scientific community for political reasons.

This year, South Africa is suddenly in the early human news again with new finds that shift the picture of human evolution. There are two new fossil sites: Gladysvale and another site as yet unpublished, each with a new series of human remains. Sterkfontein, the first site to yield an adult australopithecine of the gracile variety ("Mrs. Ples"),

now contains evidence that more robust forms were there as well at the same time. And at least some of these human ancestors may have been able to hold onto things (like tree branches) with their feet. Newly published foot bones from one of the oldest levels (member 2 ="level") at Sterkfontein, comparable in age to Lucy, show a big toe that stuck out at a slight angle to the other toes. Were there any trees to hold onto? New paleobotanical studies at Sterkfontein from the main australopithecine level (member 4) recovered fossilized vines or lianas (the kind that Tarzan swings on in the old movies) that today occur only well inside the tropical forest far to the north. No open savannas here either!

In addition, the younger horizon at Sterkfontein (member 5) has now yielded Oldowan tools dated to about 2.0 million years, slightly older than Olduvai and more "primitive" in their manufacture. Sterkfontein's archaeologist, Kathy Kuman, has suggested most of them were made by smashing quartz cobbles on a hard surface and picking out the good flakes. Who made these tools? Sterkfontein yielded another hominid, younger than the tools and provisionally classified as Homo, but Ferguson has suggested that it may be too robust for Homo and might possibly be reclassified with Australopithecus.

Was Mrs. Ples, who comes from the underlying horizon dating to 2.5-3.0 mya (or someone like her but slightly later) the toolmaker? Since gracile australopithecines were supposed to have been ancestral to Homo, while the robust forms were on a side branch, many scenarios had the late gracile forms experimenting with tools, despite the absence of any evidence for tools in gracile sites. (Tools do occur with later robust forms!) Like Lucy, Mrs. Ples may soon undergo a sex change operation and, at the very least, assume a new identity. A recent careful examination of the top of her skull suggested that something was missing. Fortunately, the piece of rock that once encased her skull had been saved. Stuck into this rock were the remnants of a small sagittal crest. Gracile females did not have this feature. Either "Mrs. Ples" was really "Mr. Ples" or else she is one of the earlier members of the South African robust line.

At this point, the taxonomy becomes really confusing. If the Homo from Sterkfontein is really Australopithecus, and if the type fossil of an adult Australopithecus africanus is really a robust form like Australopithecus (or Paranthropus) robustus, then who is Australopithecus africanus anyway? Since the original A. africanus was a child's skull and braincase, we really have no way of knowing exactly what it would have looked like when it grew up. There will certainly be many years of arguments before these and other queries surrounding the fossils we now have are resolved, let alone the questions raised by new finds.

One postscript to the Taung story involves a fascinating bit of detective work. Most South African sites consist of remains of the lairs of predators who ate australopithecines for dinner, as suggested by the many carnivore tooth marks on hominid skulls and bones. Taung was always different from the others. Despite the mining of what was probably the entire cave, only the three pieces of the Taung "baby" were recovered. No larger or more complete fossils of anything ever turned up. The damage on the Taung skull was also different -- sharp triangular nicks on the edges of the bone, and a distinctive dent in the top of the skull where the thin cranial bone was pushed into the brain. What could have made this damage? Ron Clarke and Lee Berger studied damage from many different types of carnivores and concluded that the only possible agent of destruction was a large eagle, whose talons poked a hole in the skull, and whose curved beak took distinctive bites out of the bone. This would explain why no australopithecine (or other large mammal) adults ever turned up there -- they were too big for an eagle to carry.



Early Homo: How Many Species?

The early evolution of our own species was also once thought to be a simple affair. Tool making, an enlarged brain and smaller teeth marked the emergence of Homo habilis at 1.9 mya. These features were functionally linked together by reasoning that teeth could not be smaller on a larger creature unless some "food-processing" was done outside the mouth, i.e. with tools. By 1.5 mya, even larger brains and modern body size marked the appearance of Homo erectus, who subsequently spread out of Africa. Finally, by about 500,000 years ago, early forms referred to as "archaic" Homo sapiens appeared in both Europe and Africa.

The number of species suggested for our own genus has also increased recently, and the relations between them have grown more complicated. What used to be called Homo habilis is divided into at least two, and possibly three, species, while the early Homo erectus fossils from Africa are sometimes put in their own species, Homo ergaster. In the later stages of Homo, once all grouped in the species sapiens, some authors place the early "archaics" in a separate species, "Homo heidelbergensis," and may further delineate the later Neanderthals as "Homo neanderthalensis." The species designation "sapiens" is reserved by these authors for modern humans only. Were all of these groups separate species that could not interbreed and had different adaptations? Did our previous "single species" view of the evolution of Homo obscure what was really happening?

Within a few years of finding the original Homo habilis at Olduvai, a very different early form had turned up to the north at east Turkana. This form, dated to the same time, had a larger brain but retained rather large teeth. The Olduvai fossils had small teeth, but brain sizes only slightly bigger than those of australopithecines. Bernard Wood has argued for the name "Homo rudolfensis" (after the old name for Lake Turkana) for the larger-brained Turkana form, and retains the name habilis for the smaller form, whose skeleton, recovered in 1985, suggests Lucy-like proportions of arms and legs. How did these two differ in their behavior? The record is not yet complete enough to tell. Both used

simple stone tools and occur in the same kinds of environments, usually more open and grassy than those prevailing before 2.5 mya. The difference is not due to geographical separation; a very early example of rudolfensis dating to over 2.0 mya was reported in 1993 from the Malawi sector of the east African rift, well to the south of Olduvai. Which one led to modern humans? This, too, is unclear, and may never be determinable if new early species continue to be found. Perhaps more detailed environmental and behavioral studies now underway will reveal some answers.

Why bigger brains?

Theories about the origin of the large human brain have focussed on many aspects of behavior that were supposed to have driven this change. An early view pointed to hunting. When it was shown that early humans were more likely to have been scavengers, the focus changed to tool-making. Recent dates of 2.5 mya for the earliest tools, at the Gona sites near Hadar in Ethiopia, predate the earliest evidence for an enlarged brain, and suggest that tool-making came first, brains may only have followed hundred of thousands of years later. (New early fossils of Homo from Malawi, as well as from Ethiopia, may change this perspective as well.) Another theory is that brains became larger to take advantage of a longer period of learning and childhood development. New ways of studying growth rates in early humans, however, have shown that australopithecines were more like apes than like modern humans in their growth patterns, and that even Homo erectus was not yet fully human in this respect.

Scholars have tended to assume that the reason that brains did not get larger earlier is that they were not needed. A new theory, the "expensive tissue hypothesis" has argued instead that brains could not become larger earlier, because they used up too much of the body's energy -- ounce for ounce, the mammalian brain uses nine times as much energy as the rest of the body, on average. Leslie Aiello and Phillip Wheeler point out that five major organs or organ systems use up 60-70% of the body's energy at rest, although they account for only 7% of the body's total mass. These "expensive" organs are the

gut, the heart, the liver, the kidney and the brain. (Lungs are also quite "expensive.") Unless the animal eats a lot more high calorie foods (very unlikely in the case of humans, to judge from the teeth) *or* one of these organs gets smaller, there is no energy budget left to feed a larger brain.

What got smaller around 2 mya that allowed the brain size to finally increase? The heart, liver and kidney are scaled to body size (mass); they cannot get smaller unless you do. The only remaining possibility is the gut, which could become smaller *if* foods were either higher quality or partially "digested" outside the body by tools. Lucy's rib cage suggests that her gut was enormous, and that her body proportions were more similar to those of a gorilla than to a modern human. No wasp-waists or hourglass figures among the australopithecines -- indeed no waists at all! On the other hand, the oldest relatively complete skeleton of early Homo, the 'boy' from Lake Turkana (see *Anthro. Notes*, vol. 9, no. 3, fall 1987, pp. 11-15) while much larger than Lucy, has both a larger brain **and** a delicate waist and flattened rib-cage like ours.

But if changing food patterns made big brains possible, what made them desirable? A new book by Rick Potts of the Smithsonian's Human Origins Program argues that the major adaptation of early Homo was the ability to deal with rapidly changing climates and diverse environments, what he calls "variability selection." As climate swings became more severe, brain size and body size increased, and learning rather than instinctive behavior was at a premium. The major shift towards greatly expanded brains relative to body size took place not in the early stages of human evolution but around 500,000 years ago, with the onset of the dramatic climate changes associated with major ice ages and associated changes in the tropics.

Out of Africa: When and to Where?

When did humans first expand out of Africa, and where did they go? Only a few years ago, the general patterning seemed to indicate that the exodus was just before 1 mya, that the human type involved was Homo erectus and that the destination was Asia, not Europe. The earliest well-dated sites

with definitive traces of human activity in Europe all appeared to cluster in the Middle Pleistocene after about 730,000 or even 500,000 years ago. New dates for both Asia and Europe as well as new finds suggest that this scenario, like the others mentioned in this article, may be far too simplistic.

The most widely accepted early dates in Asia are for 'Ubeidiya, a well-known site in Israel where Oldowan artifacts appear to go back to ca. 1.4 mya based on faunal comparisons with Africa. New chronometric dates for the eastern part of the continent have been even more surprising. Carl Swisher and Garniss Curtis of the Berkeley Geochronology Center have published several dates older than 1.0 mya for the Modjokerto child, an early Homo erectus find from Java. These cluster around 1.8 mya. Some who disagree with these dates have argued that while there is indeed a volcanic ash near the site of the find that is of this age, it is far from clear how that relates to the age of the find, which was made by a local farmer in the 1930s. Swisher and Curtis have responded that the ash that lines the skull is a close match chemically to the dated ash; others have either disputed their conclusions or pointed out that **both** the ash **and** the skull could have washed into the site together. In the latter case the skull could be much younger than the ash. The continuing accumulation of new dates for other sites in Java such as Sangiran, however, appear to confirm the presence of Homo erectus in Java between 1.4 and 1.8 mya.

An even more controversial site, Longgupo, in South China, was recently described by Huang, Ciochon and others in both *Nature* and *Natural History*. This site contains a small jaw fragment of what the authors argue is early Homo, either habilis or ergaster, the first such fossil outside Africa. The find was associated with early Asian mammals (Late Pliocene to early Pleistocene in age) including a giant ape (Gigantopithecus). Also found were two very minimally fashioned objects of stone that the authors argue are tools. The possible attribution to habilis is based on the size and forward position of the cusps of the second premolar together with its double root. Others point out that these characteristics are not unknown from Homo

ergaster or early erectus, or even some early Asian apes.

In addition, the dating of Longgupo is based on paleomagnetism, which measures the direction and strength of the earth's magnetic field in samples of earth taken from around the bones. The earth's magnetic field periodically dissolves, reorganizes and changes direction; 800,000 years ago, for example, a compass needle would have pointed south rather than north. These reversals are encoded in newly forming sediments, as the atoms align themselves with the prevailing magnetic field at the time. The ancient magnetic signal is locked in to the sediment and can be measured in the lab. Precise dating of reversals in **volcanic** sediments using the potassium argon technique has led to a sequence of ages for 'normal' (north-oriented) and 'reversed' (south-oriented) periods. In **non-volcanic** sediments, such as those at Longgupo, researchers must try to guess which 'normal' or 'reversed' interval they are looking at, based on the entire sequence. The important levels at Longgupo are 'normal', below a layer that is 'reversed' and several meters below a date of 1.02 mya, based on the decay of uranium isotopes in a sample of fossil tooth enamel and dentine. The researchers argue that the closest 'normal' period before 1.02 mya is the one at 1.78 to 1.96 mya. If the uranium series age is closer to 0.78 - 0.84 mya, which the authors admit is possible, then the earth around the 'human' bones could date to 0.9 to 1.0 mya, also a normal period, and much closer to the age of other old Chinese hominids.

What about Europe? The oldest European, and the only clear Homo erectus fossil from that continent recently turned up in the Republic of Georgia, in the Caucasus Mountains that separate Europe from the Near East. The fossil jaw, which looked very much like one from Kenya, was located above a basalt flow dating to 1.8 mya. in a normally polarized horizon. One additional problem is that the find was not in some undisturbed cave but in the wall of a medieval storage cellar in the town of Dmanisi. A recent expedition suggested that the fossil came from a series of burrows or dens, excavated by prehistoric mammals. Although the earth into which the dens were excavated is of normal polarity, the

earth that fills the dens is reversed. This means that the fossil is **younger** than 1.8 mya (when polarity was normal) but must be older than 0.78 mya (polarity has been normal from that time to the present). The most likely estimate at the moment is ca. 1.4 mya, around the same age as 'Ubeidiya.



A final European site in the news is much further into Europe than Dmanisi: the site of Atapuerca in northern Spain, where literally hundreds of human bones have been recovered from narrow fissures in the rock. Most relate to Middle Pleistocene times, but in the oldest site, the dating may suggest an age of 800-900,000 years ago. It is especially interesting that these are **not** classic examples of Homo erectus, but already suggest some specializations in the direction of Neanderthals, such as tooth row with a space behind the last tooth, deep pulp cavities in the teeth, semicircular brow ridges, and some enlargement of the middle face. How did all those human bones end up in this area? Excavation and analysis of this site are ongoing, and perhaps further publication will soon enlighten us.

Ex Africa Semper Aliquid Novi

(Ancient Greek proverb, "Always something new Out of Africa," cited by Pliny the Elder and Charles Darwin)

Just as we thought that the general picture of human evolution was becoming clear, new finds have suggested that our picture was too simplistic. The tree is more bushy, the causes more complex, and the migrations multiple and in several directions. These are very exciting times in palaeoanthropology, and we look forward with great anticipation to the next few years of research and analysis.

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GO ASK ERIC

The ERIC network (Educational Resources Information Center) has just finished updating its Anthropology InfoGuide. The InfoGuides point K-12 educators to Internet, ERIC, and traditional print information resources in specific topics of interest. This particular InfoGuide includes URL addresses for museum-based web exhibits in anthropology. To find the guide, visit <http://ericir.syr.edu> and enter the Virtual Library.



SHAKING THE FAMILY TREE

TEACHER'S CORNER: BEAN BAG POPULATION GENETICS

by Jeffery W. Froehlich and Marilyn R. London

How does evolution "work"? This exercise defines basic terms and describes experimental procedures for teachers to use when explaining concepts in evolution. Students work in teams of two, and each team completes two separate experiments demonstrating 1) random genetic drift, and 2) natural selection. Since each team must complete up to ten trials for each experiment, the teacher may want to plan this activity for two class periods.

After all the experiments have been completed, the teams can regroup for a discussion of the experimental outcomes. Under the Reports section of this exercise, guidelines are offered for each group's written summary of the experiments. Teachers can focus on the following for class discussion: How do the experimental procedures differ? How does the sample size of beans affect the outcome of the experiments? How are the outcomes of the experiments similar? How are they different? How do the two evolutionary forces demonstrated--random genetic drift and natural selection--change populations differently?

It is difficult to predict the exact outcomes of these experiments, just as it is difficult to predict evolutionary changes. However, the teams can compare their different results, and discuss how the

changes in their populations occurred (gradually or suddenly) through the steps of the experiments. These different results, and the variation in how they are achieved, simulate evolutionary change in the natural world. By the end of the discussion, students should be able to articulate how seemingly minor evolutionary changes can have enormous impact on small populations.

Evolution is normally studied in terms of *populations* instead of *individuals*. In the classroom, it may seem impossible to set up a laboratory procedure that will help students to understand the forces of mutation, migration, random genetic drift, and natural selection--which all act on populations. However, many of these concepts can be demonstrated in a very basic way. In this activity, beans of two different colors are used to represent two alleles of a single gene that controls a single trait, such as a gene that controls for eye color. The frequency of each color of bean may change from one generation (experimental trial) to the next. (Remember that higher organisms have two copies of each chromosome, one copy originating from each parent. Consequently, the two chromosomes may have different alleles of the same gene depending on what alleles the organism's parents had.) This is a fairly simplistic demonstration that does not take into account dominance, linkage, or other complexities of genetics, but its simplicity will give students an appreciation for how the genetic makeup of a population can be altered over time by seemingly minor forces.



Terminology

Several terms are used to explain differences in populations and how populations change over time. These terms should be used when the students write their reports at the end of the experiments.

- A **gene** is a segment of DNA that contains all of the information necessary for the expression of a protein or structural RNA.

- **Alleles** are variants of a single gene, found in the same position or locus on a chromosome; they represent the possibilities for variation in a population with respect to a particular inherited trait.

- **Locus**: refers to a location on a chromosome occupied by a gene (which may have several alleles).

- **Gene frequency** represents how often an allele occurs in a population. The number of alleles for a particular trait is divided by the total number of genes in the sample of the population you are counting. Gene frequencies are always expressed in decimals, so that if a gene (allele) is present in 50% of a population, the gene frequency is 0.5.

- **Fixation** of an allele occurs when, through evolutionary processes, the gene frequency of one allele at a locus becomes 1.0 (everyone in the population has that allele) or has disappeared from the population entirely (gene frequency = 0.0).

- **Evolution** is a change in a population's gene frequencies over time. Evolutionary forces are processes that can change gene frequencies.

- **Breeding population** describes the part of the population likely to interbreed. An entire species can be considered a breeding population because, theoretically, all members of a species can interbreed. In the real world, however, many individuals do not breed in their own group for some physiological reason (such as age), or between groups (for behavioral or geographic reasons). In population genetics, the breeding population consists only of the individuals that can potentially mate and produce viable offspring. Only breeding

individuals have the potential to contribute genes to the next generation.

- **Population genetics** is the study of the behavior of genes and their alleles in populations.

- **Selection** describes a force that determines which genes are passed on to the next generation.

- **Natural selection** is the effect of the environment's interaction with each individual; it acts directly on the individual's phenotype and therefore, indirectly, on the genotype. It is directional because the environment will "favor" the survival of some individuals over other individuals; for instance, if there is a gene that allows certain individuals to store fluids better, these individuals would have an advantage during times of drought. The term "fitness" describes the relative reproductive success of different individuals in a particular environment. Those who survive to produce offspring, which then survive to reproduce, are more fit than those who do not meet both requirements. The "fittest" are those that leave the highest number of viable offspring. Natural selection acts on individuals, but individuals do not evolve.

- **Artificial selection** occurs when a conscious effort is made to change the genetic makeup of a population, as when humans choose "attractive" or economical traits in animal breeding.

- **Phenotype** is the description of visible traits that characterize an individual or members of a population. Phenotype can reflect both an individual's genetic makeup and the effects of the environment on an individual.

- **Genotype** is the hereditary makeup of an individual.

- **Mutations** are changes in the genetic material. Not all mutations are "bad"--without mutations there would not be variability (in genetic terms, alleles). Because mutations occur very infrequently, they are very slow to change gene frequencies in a population--unless it is a very small population.

•**Random genetic drift** refers to a change in gene frequencies that is completely random, i.e., there is no necessary selection for or against a particular allele. The allele simply occurs, by chance alone, more or less often in a generation than in the previous generation. This drift has no particular direction -- it can go back and forth. In order for this drifting to influence the entire population's genotype frequency, it is necessary to have a small population. It is possible for a small population to continue to drift toward or away from a particular gene frequency, in which case it can reach fixation (all or none).

•**Migration** refers to the flow of genes into or out of an isolated population through inbreeding. A small amount of **gene flow** often occurs between populations that normally do not interbreed. As with mutation and random genetic drift, migrants carrying different alleles into or out of a population have a much better chance of changing the population's gene frequencies if the population is small. Migration is a way to "un-fix" a particular allele in a population.

•**Founder effect** occurs when a small group of individuals forms a new population, which is isolated from the original population. The gene frequencies of subsequent generations may be very different from the original population simply because the small number of individuals who are founders probably do not carry all the allelic forms found in the original population.

Bean Bag Population Genetics Activity

In this activity, beans of two different colors demonstrate evolutionary forces, plus the effects of population size on these forces. Use red and white beans of similar size. In these experiments, the beans represent two different alleles for a gene controlling a single trait. To approximate the possible distribution of genes in populations, nine different "populations" of beans must be prepared. In small containers, such as shallow bowls or jars, create populations of 100 beans. In the first container there will be 10 red beans and 90 white beans (10R/90W; gene frequency of the red beans is 0.1); in the second there will be 20 red and 80 white

(20R/80W; gene frequency of the red beans is 0.2); in the third there will be 30 red and 70 white (30R/70W; 0.3); and so on until you have 90 red and 10 white beans (90R/10W; 0.9) in the last container. The containers should be carefully labeled with both the number of beans and the gene frequency, so that it is easy to determine their contents.

Students work in pairs. Each team requires two small empty containers; a pair of tweezers; a paper plate, with a few random openings large enough for some beans to drop through; a large coffee can; and two recording sheets (see below).

Procedures

Experiment 1: This experiment demonstrates **random genetic drift** in different sized populations by showing the effects of sampling a small number of genes from a population in order to form the next generation. When populations are so small that not many individuals are reproducing, the effect of random genetic drift is greater. The differences in sample size will demonstrate how change can occur more quickly when populations are small.

a) Using the tweezers, and without looking at the beans, one student draws 5 beans from the 50R/50W container, where the gene frequency of the red beans is 0.5. The 5 beans are placed in the student's empty container. Count the number of red beans in the container, thereby determining the gene frequency of this new "population," record this new gene frequency on the sheets, and return the beans to their original container. For instance, if there are 2 red beans and 3 white beans in the student's container, the gene frequency is determined by dividing 2 (the number of red "alleles") by 5 (the total number of "genes"); the gene frequency is 0.4. Find the container that has the same gene frequency as the new population (in this case, 40R/60W), and draw 5 beans from that container. Again, count the number of red beans, determine the gene frequency, record your findings, and return the beans to their container. The experiment is repeated until 10 generations (trials) are simulated, or until the gene frequency reaches **fixation** (all red or all white beans).

b) The second member of the team repeats the procedure, starting again with the 50R/50W container, and recording all of the trials.

c) The first student collects data in a similar fashion to the original experiment, but draws populations of 10 beans in each trial instead of 5. All data are recorded on the data sheet.

d) The second student repeats the procedure with populations of 10.

e) The procedure is repeated by each student, drawing populations of 20 beans in each trial.

Experiment 2: This experiment is designed to demonstrate **natural selection** by using a "screen," in this case, a paper plate with holes randomly poked through it, as a selective agent. Selection is the only directed evolutionary process, where an external or environmental factor influences the survival and reproductive success of particular genes. The "screen" in this experiment acts the same way as a change in the environment might act. Since the beans are not uniform in size, the screen (the external factor) will "select" the desirable beans. Changing the sample size (5, 10, then 20) will demonstrate how the size of the population can determine how rapidly evolution occurs. The paper plate is laid on top of the coffee can and pushed in a little to stabilize it.

a) Start again with the 50R/50W container and a population of 5. Pour beans slowly directly from the 50/50 container until the correct population (in this case, 5) falls through. If the can and screen are shaken to "help" the beans through, they must be shaken for every trial. If too many beans drop into the coffee can, the trial must be repeated.

b) Repeat as in Experiment 1, so that there are two experiments each for the population sizes of 5, 10 and 20, with each experiment running to fixation or 10 trials. Record the frequency of red beans on the table for each experiment.

Reports

Using the data collected, each team writes up a few paragraphs about each experiment. The following information should be included:

a) a description of the purpose of the experiment, and the procedures, in the students' own words;

b) a discussion on how sample size affects the outcome of each experiment;

c) a comparison of the outcomes of the two experiments (how the results of the experiments are similar, and how they are different) and;

d) an analysis of how the forces of evolution demonstrated in these experiments--random genetic drift and natural selection--affect population change differently.

Recording sheet:

TRIALS

Sample Size!	1	2	3	4	etc
5 (student 1)					
5 (student 2)					
10 (student 1)					
10 (student 2)					
20 (student 1)					
20 (student 2)					

Student names _____

Experiment _____

Make two copies of the table for each team. Record the data for each experiment on a separate table, and label the tables clearly. The data (frequencies) may also be recorded on graph paper, if desired.

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MAYAQUEST: AN INTERACTIVE LEARNING EXPEDITION

[Editor's Note: What happens when you link teachers and students in North American classrooms with a team of adventurers and archaeologists bicycling across Mexico and Central America in search of the lost Maya Civilization? For three months in 1995, and again in 1996, the MayaQuest team travelled over 2,000 miles through Guatemala, Mexico, Belize and Honduras. Through satellite phone hookup and Internet and Prodigy connections, classrooms in 42,000 U.S. schools traveled with them. This was no ordinary e-mail project but a highly orchestrated and complex undertaking that included on line-chats (though not with team members themselves), user groups exchanging over 77 lesson plans in English and Spanish, World Wide Web pages, dialogue with on-line experts, live student-produced TV broad-casts and CNN weekly updates. *AnthroNotes* first reported on MayaQuest in the fall of 1994; what follows are the assessments of an archaeologist, computer specialist, and educator involved in the development and implementation of MayaQuest.]

The Archaeologist's Perspective

I had agreed to give a school talk on Classic Maya archaeology to an elementary school participating in MayaQuest. But I was running late, and annoyed that it was taking time away from my planning for Minnesota Archaeology Week. Arriving out of breath and several minutes late, I began to set up my slides, only vaguely aware that a lot of noisy kids were trooping into the room that was being enlarged as teachers folded back partitions.

When I turned around to face the class, I just stood there, amazed, and stared. What I experienced completely validated my decision to help develop MayaQuest; the students I was visiting clearly were participating in an exciting adventure-learning project that had captured their imagination and led them on their own personal quest. My experience that day highlighted all the positive aspects of being involved in this public education project.

The scene before me was a completely transformed environment. Behind the dividers, the room had been turned into a jungle--paper trees and vines, birds and New World monkeys hanging from the ceiling. Palenque's Temple of the Inscriptions was there, complete with Pacal's tomb behind a tiny cardboard flap. These students had not only been following the MayaQuest bicycle expedition; they had been living and breathing the ancient and modern Maya and their environment for weeks. My talk became a reinforcement of their experiential learning and discovery through MayaQuest. These one hundred kids were with me every step of the way. They had good questions, were prepared to learn, and wanted to use me to check the accuracy of their data. My visit was an integrated component of their unit on the Maya. It was an exciting moment of validation for me that the impact this experiment had had on these enthusiastic students was well worth the effort many of us had put into it.

This project teaches us that we must look for partnerships and be open to opportunities. We have to guard against the temptation to feel as if we are selling out by collaborating with nonarchaeologists in the teaching of archaeology and history. Teachers are professionals in their own fields and welcome us for the rich content we can contribute to their teaching. In the case of MayaQuest, the use of computer technology helped us achieve this partnership.



The Technology Coordinator's Perspective

With the wealth of resources available on the Internet, how do teachers find projects like MayaQuest and integrate them into their curriculum? The best Internet applications are made up of unique partnerships. For MayaQuest, the Internet provided a means to mediate communication on behalf of the kids, the team, and the scientist, whose input was essential in raising the students' level of learning. One student's reaction last year was: "Having David Friedel respond to our question was like getting batting practice from Babe Ruth."

We now have the opportunity to forge strong partnerships between K-12 education specialists, experts in the field, and informal education centers (e.g. museums, zoos). By adding this additional layer to the schools, science centers, and the field professionals, we not only forge new alliances but justify their existence. How can scientists warrant the additional time required to expand their work to include K-12 education? What better way than to have an audience of students who are not only engaged in the study of these professionals, but also advocating informally for more and broader participation at a public level. In an interview with Maya expert Linda Schele, she declared that MayaQuest did more to attract kids to the field than all her book sales and lectures in the past 25 years.

One of the problems with the Internet is its creation of a certain infatuation with the technology itself. We are now seeing a tremendous amount of information being generated with an over-use of the technical bells and whistles. Fortunately, we will reach a time when these technologies will become common-place, like the telephone, and then the effective use of the Internet will be easier to measure. In the meantime we need to be diligent and critical consumers of the resource and the information, and ask ourselves, "Is this improving student learning"? If we cannot answer yes, then there is no need to force its use.

With MayaQuest, kids became connected with another culture. They realized that the people in Latin America had a rich culture history before

Columbus. They saw connections between environmental degradation and cultural decline. They experienced a myriad of ways to learn about issues and they saw that experts don't always agree. They wrestled with ethical issues and clarified their own values. What conclusions could archaeologists and educators draw?

Part of the assessment of these projects will need to take place in 15-20 years. Will we look back at this time and be able to identify professionals in scientific fields whose first introduction was a participation in MayaQuest or similar project? If we answer yes, then the value of these activities can certainly be measured. Will we be able to look back in 20 years and identify cultural shifts in peoples' attitudes towards supporting the sciences? If we can answer yes, then these efforts have not been in vain.

The Educators' Perspective

MayaQuest 1995 - The year we threw out the textbooks and traveled to the remote regions of Central America without leaving the classroom; a year for magic and incredible insights. By participating in the MayaQuest Project, we learned that our students had an insatiable hunger for knowledge and they were dying for us to fill them up. But first we had to get their attention.

In February, several teachers embarked on a three month expedition throughout Central America. We brought with us 300 1st, 2nd, 4th and 6th graders from Como Park Elementary School in St. Paul, Minnesota. It wasn't the usual travel adventure; we didn't get bug bites, sunburn or even Montezuma's Revenge. What we did get was an opening into the world of the Maya culture through an on-line adventure called MayaQuest.

Our goal was to have the kids experience the sights, sounds, food, history, and people of the Maya civilization in the same way the team did, except we stayed in Minnesota. One hundred fifty teachers-strong, we were able to simulate a Maya community by using Maya arithmetic in our math class, building a rain forest with authentic birds, plants and animals, deciphering hieroglyphs, and writing Maya-style

poetry. The beauty of this experiential style of teaching is its virtually painless application. Students hardly realized they were "learning," because they were too busy discovering and trading information.

One of the most gratifying aspects of this program was watching these young minds come alive with their own imaginations. The kids learned about Mayan culture, and that learning triggered an unbridled range of theories pertaining to Mayan life-and death. For instance, a great enthusiasm arose from discussions on why and how the Maya civilization collapsed. Some said it was due to famine or disease, while one student believed it was due to alien abduction. Wild hypothesizing, yes, but it let us know that these kids were thinking imaginatively. They were synthesizing information; using the facts they'd learned as a foundation for creative thinking of their own.

How did we pull this off while staying within our curriculum? By using a little creativity and thinking in the most untraditional ways possible! We turned our classrooms into living labs for discovery every day. As a collaborative effort among teachers, we built a school-wide curriculum centering on the Maya culture. It covered the basics of readin', writin', and 'rithmetic, but we went far beyond that to cover a wide variety of other disciplines, including math, science, geography, art, architecture, history, anthropology and archaeology. It was clearly an experiment that worked for us!

Lots of kids, for instance, have a tough time with math, and many are not at all interested. Not so during these three months! The students were thrilled to learn how the Maya figured things out in their mathematical base 20 system. Once the kids were comfortable with the numbers, they converted their classroom numbers with the three Mayan symbols: the shell, the bar, and the dot. Soon all the classrooms had Mayan numbers on their doors. The converting process was a big hit. Students began converting their birthdays and telephone numbers to Mayan numbers.

The students also did a lot of reading, but not from the most conventional sources. One sixth grade

special education class became the experts at deciphering hieroglyphs. Not only were the students able to read the glyphs, they were able to create their own personal stories through them. With a color printer, they designed frameworthy reproductions of these glyphs, which they posted all over the school. This same industrious group, with the help of a skilled teacher and carpenter, designed and built a six foot tall majestic Maya Ruin in honor of the site, Tikal.

Meanwhile, sixth graders corresponded, through MayaTalk on the Internet (the MayaQuest Listserv), with students all over the globe, from Australia to Belize. Before and after school and during recess, the students visited the computer resource center to gather clues about the ancient Maya.

We had to take risks, such as the decision to abandon our textbooks and hide our work sheets. The students enjoyed the risks; they were thrilled with the connections they made with an ancient civilization, but more importantly, the connections they made with each other. The learning was not traditional; it was serendipitous. The students were the explorers; we just gave them a little guidance finding their own path.

Resources:

- MayaQuest <http://www.mecc.com/mayaquest>
- Society for American Archaeology <http://www/saa/org>
- TimeTraveler <http://id-archserve.ucsb.edu/timetraveler/main.html>
- The Maya*. Lawana Hooper Trout, Chelsea House Publishers ISBN 1-55546-714-8
- The Ancient Maya*. 5th ed. Robert J. Sherer. Stanford University Press ISBN 0-8047-2310-9



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AnthroNotes has a three part mission:

- 1) to more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
- 2) to help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of curriculum subjects; and
- 3) to create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

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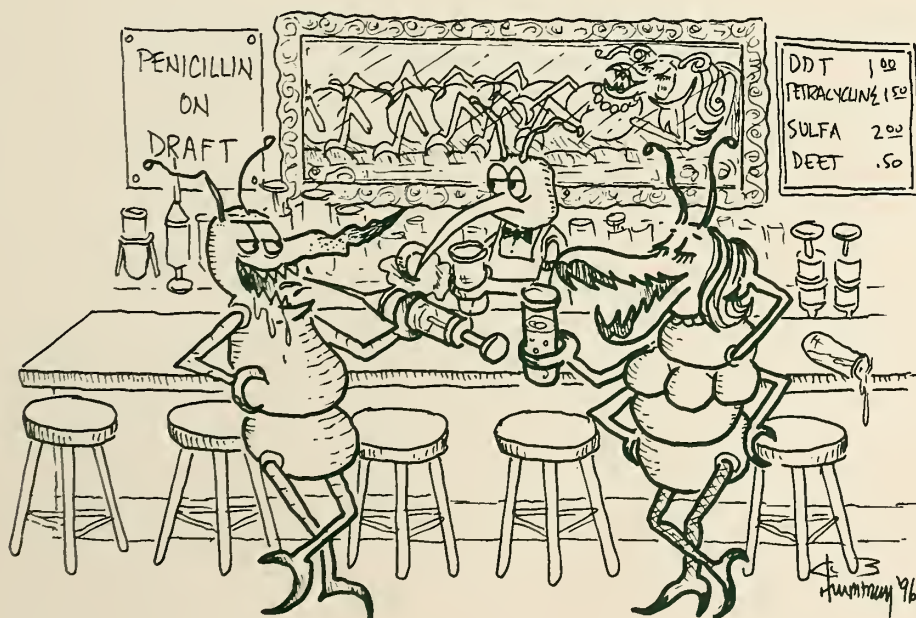
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DISEASE IN HUMAN EVOLUTION: THE RE-EMERGENCE OF INFECTIOUS DISEASE IN THE THIRD EPIDEMIOLOGICAL TRANSITION

by George J. Armelagos, Kathleen C. Barnes, and James Lin

For millions of years, humans and their ancestors suffered from diseases -- both the kind caused by infectious pathogens (e.g., bacteria, viruses, parasites) and the kind caused by our own bodies as they age and degenerate. Over this long period, humans constantly created new ways of living and eating, and actual physical or genetic changes evolved to minimize the effects of these diseases. From the point of view of a bacteria or virus, however, any shift in the physical makeup or behavior of its human host represents not only an obstacle but also a challenge to be overcome. As a result, new diseases emerged with each major change in the human way of life.

For nearly four million years, humans lived in widely dispersed, nomadic, small populations that minimized the effect of infectious diseases. With the agricultural revolution about 10,000 years ago, increasing sedentism and larger population groupings resulted in the **first epidemiological transition** in which infectious and nutritional diseases increased. Within the last century, with the advent of public health measures, improved nutrition and medicine, some populations in developed nations underwent a **second epidemiological transition**. During this transition, infectious diseases declined and non-infectious, chronic



diseases, and degenerative conditions increased. Today, with the increasing use of antibiotics, we are facing a **third epidemiological transition**, a reemergence of infectious disease, with pathogens that are antibiotic-resistant and have the potential to be transmitted on a global scale. Populations that experienced and those that never experienced the second epidemiological transition are both increasingly exposed to antibiotic-resistant pathogens.

"Emerging" pathogens are seen as "new" diseases, "discovered" when they have an impact on our adaptation or survival. Even when we take a more holistic ecological perspective, it is often limited to a position that considers "emerging" disease as the result of environmental changes that are only relevant to the present situation as it affects humans here and now. This article argues that the emergence of "new" diseases has been the human pattern since the origin of the hominids and accelerated with the shift to agriculture 10,000 years ago.

Paleolithic Baseline

For most of their 4,000,000 years of evolutionary history, human populations lived in small, sparsely settled groups. Population size and density remained low throughout the Paleolithic. Fertility and mortality rates in small gathering-hunting populations would have to have been balanced for the population size to remain small.

Demographic factors creating this stability are still a matter of discussion. Some demographers argue that gatherer-hunters were at their maximum natural fertility, balanced by high mortality. Armelagos, Goodman and Jacobs (1991) argue, however, that gatherer-hunters maintained a stable population with controlled moderate fertility balanced by moderate mortality.

The demographic changes following the Neolithic may provide insights into the case for population stability controlled by moderate fertility and mortality during the Paleolithic. Following the

Neolithic revolution, a dramatic increase in population size and density occurred. It was thought that the Neolithic economy generated food surpluses that led to a better nourished and healthier population with a reduced rate of mortality. Since populations were at their natural maximum fertility, there would have been a rapid increase in population size.

The empirical evidence suggests an alternative scenario in the shift from gathering and hunting to agriculture. The picture suggests a much bleaker picture of health. Instead of experiencing improved health, there is evidence of a substantial increase in infectious and nutritional disease (Cohen and Armelagos 1984). A paradox emerges if the traditionally accepted models of Paleolithic fertility and mortality are correct. How can a population experiencing maximum fertility during the Paleolithic respond with exponential growth in population when their health is deteriorating?

A consideration of the disease ecology of contemporary gatherer-hunters provides insights into the types of disease that probably affected our gatherer-hunter ancestors. Polgar (1964) suggests that gatherer-hunters had two types of disease to contend with in their adaptation to their environment. One class of disease would be those organisms that had adapted to prehuman ancestors and persisted with them as they evolved into hominids. Head and body lice (*Pediculus humanus*), pinworms, yaws, and possibly malaria would be included in this group. Cockburn (1967) adds to this list most of the internal protozoa found in modern humans and such bacteria as salmonella, typhi, and staphylococci.

The second class of diseases are the zoonotic, which have non-human animals as their primary host and only incidentally infect humans. Humans can be infected by zoonoses through insect bites, by preparation and consumption of contaminated flesh, and from wounds inflicted by animals. Sleeping sickness, tetanus, scrub typhus, relapsing fever, trichinosis, tularemia, avian or ichthyic tuberculosis, leptospirosis, and schistosomiasis are among the

zoonotic diseases that could have afflicted earlier gatherer-hunters (Cockburn 1971).

Although early human populations were too small to support endemic (constantly present) pathogens, they maintained some kind of relationships with the vectors that would later serve to perpetuate such human host-specific diseases as yellow fever and louse-borne relapsing fever. Certain lice were ectoparasites as early as the Oligocene, and the prehumans of the early Pliocene probably suffered from malaria, since the *Anopheles* (mosquito) necessary for transmission of the disease evolved by the Miocene era. Frank Livingstone, an anthropological epidemiologist, dismisses, however, the potential of malaria in early hominids except in isolated incidences because of the small population size and an adaptation to the savanna, an environment that would not have included the mosquitoes that carry the malaria plasmodium.

The range of the earliest hominids was probably restricted to the tropical savanna. This would have limited the pathogens that were potential disease agents. During the course of human evolution, the habitat expanded gradually into the temperate and eventually the tundra zones. Hominids, according to epidemiologist Frank Lambrecht, would have avoided large areas of the African landscape because of tsetse flies and thus avoided the trypanosomes they carried. He also argues that the evolution of the human species and its expansion into new ecological niches would have led to a change in the pattern of trypanosome infection. While this list of diseases that may have plagued our gathering-hunting ancestors is informative, those diseases that would have been absent are also of interest. The contagious community diseases such as influenza, measles, mumps, and smallpox would have been missing. There probably would have been few viruses infecting these early hominids, although Cockburn (1967) disagrees and suggests that the viral diseases found in non-human primates would have been easily transmitted to hominids.

The First Epidemiological Transition

Disease in Agricultural Populations

The reliance on primary food production (agriculture) increased the incidence and the impact of disease. Sedentism, an important feature of agricultural adaptation, conceivably increased parasitic disease spread by contact with human waste. In gathering-hunting groups, the frequent movement of the base camp and frequent forays away from the base camp by men and women would decrease their contact with human wastes. In sedentary populations, the proximity of habitation area and waste deposit sites to the water supply is a source of contamination. While sedentarism did occur prior to the Neolithic period in those areas with abundant resources, once there was the shift to agriculture, sedentary living was necessary.

The domestication of animals provided a steady supply of vectors and greater exposure to zoonotic diseases. The zoonotic infections most likely increased because of domesticated animals, such as goats, sheep, cattle, pigs, and fowl, as well as the unwanted domestic animals such as rodents and sparrows, which developed (Polgar 1964) permanent habitats in and around human dwellings. Products of domesticated animals such as milk, hair, and skin, as well as the dust raised by the animals, could transmit anthrax, Q fever, brucellosis, and tuberculosis. Breaking the sod during cultivation exposed workers to insect bites and diseases such as scrub typhus. Frank Livingstone showed that slash-and-burn agriculture in west Africa exposed populations to *Anopheles gambiae*, a mosquito which is the vector for *Plasmodium falciparum*, which causes malaria. Agricultural practices also create pools of water, expanding the potential breeding sites for mosquitos. The combination of disruptive environmental farming practices and the presence of domestic animals also increased human contact with arthropod (insect) vectors carrying yellow fever, trypanosomiasis, and filariasis, which then developed a preference for human blood. Some disease vectors developed dependent relationships with human habitats, the best example of which is *Aedes aegypti* (vector for yellow fever

and dengue), which breeds in stagnant pools of water in open containers. Various agricultural practices increased contact with non-vector parasites. Irrigation brought contact with schistosomal cercariae, and the use of feces as fertilizer caused infection from intestinal flukes (Cockburn 1971).

The shift to agriculture led to a change in ecology; this resulted in diseases not frequently encountered by forager populations. The shift from a varied, well-balanced diet to one which contained fewer types of food sometimes resulted in dietary deficiencies. Food was stored in large quantities and widely distributed, probably resulting in outbreaks of food poisoning. Intensive agricultural practices among the prehistoric Nubians resulted in iron deficiency anemia as did the reliance on cereal grain, weaning practices, and parasitic infestation. The combination of a complex society, increasing divisions of class, epidemic disease, and dietary insufficiencies no doubt added mental stress to the list of illnesses.

Disease in Urban Populations

The development of urban centers is a recent development in human history. In the Near East, cities as large as 50,000 people were established by 3000 BC. In the New World, large urban settlements were in existence by AD 600. Settlements of this size increase the already difficult problem of removing human wastes and delivering uncontaminated water to the people. Cholera, which is transmitted by contaminated water, was a potential problem. Diseases such as typhus (carried by lice) and the plague bacillus (transmitted by fleas or by the respiratory route) could be spread from person to person. Viral diseases such as measles, mumps, chicken pox, and smallpox could be spread in a similar fashion. Due to urbanization, populations for the first time were large enough to maintain disease in an endemic form. Aidan Cockburn, a paleopathologist, estimated that populations of one million would be necessary to maintain measles as an endemic disease. What was an endemic disease in one population could be the source of a serious epidemic (affecting a large

number of people at the same time) disease in another group. Cross-continental trade and travel resulted in intense epidemics (McNeill 1976). The Black Death, resulting from a new pathogen, took its toll in Europe in the 1300s; this epidemic eliminated at least a quarter of the European population (approximately 25 million people).

The period of urban development can also be characterized by the exploration and expansion of populations into new areas that resulted in the introduction of novel diseases to groups that had little resistance to them (McNeill 1976). For example, the exploration of the New World may have been the source of the treponemal infection (syphilis) that was transmitted to the Old World. This New World infection was endemic and not sexually transmitted. When it was introduced into the Old World, a different mode of disease transmission occurred. The sexual transmission of the treponeme created a different environment for the pathogen, and it resulted in a more severe and acute infection. Furthermore, crowding in the urban centers, changes in sexual practices, such as prostitution, and an increase in sexual promiscuity may have been factors in the venereal transmission of the pathogen.

The process of industrialization, which began a little over 200 years ago, led to an even greater environmental and social transformation. City dwellers were forced to contend with industrial wastes and polluted water and air. Slums that arose in industrial cities became focal points for poverty and the spread of disease. Epidemics of smallpox, typhus, typhoid, diphtheria, measles, and yellow fever in urban settings were well documented. Tuberculosis and respiratory diseases such as pneumonia and bronchitis were even more serious problems, with harsh working situations and crowded living conditions. Urban population centers, with their extremely high mortality, were not able to maintain their population bases by the reproductive capacity of those living in the city. Mortality outstripped fertility, requiring immigration to maintain the size of the population.

The Second Epidemiological Transition: The Rise of Chronic and Degenerative Disease

The second epidemiological transition refers to the shift from acute infectious diseases to chronic non-infectious, degenerative diseases. The increasing prevalence of these chronic diseases is related to an increase in longevity. Cultural advances results in a larger percentage of individuals reaching the oldest age segment of the population. In addition, the technological advances that characterize the second epidemiological transition resulted in an increase in environmental degradation. An interesting characteristic of many of the chronic diseases is their particular prevalence and 'epidemic'-like occurrence in transitional societies, or in those populations undergoing the shift from developing to developed modes of production. In developing countries, many of the chronic diseases associated with the epidemiological transition appear first in members of the upper socioeconomic strata, because of their access to Western products and practices.

With increasing developments in technology, medicine, and science, the germ theory of disease causation developed. While there is some controversy about the role that medicine has played in the decline of some of the infectious diseases, a better understanding of the source of infectious disease exists, and this admittedly has resulted in

increasing control over many infectious diseases. The development of immunization resulted in the control of many infections and recently was the primary factor in the eradication of smallpox. In the developed nations, a number of other communicable diseases have diminished in importance. The decrease in infectious disease and the subsequent reduction in infant mortality has resulted in greater life expectancy at birth. In addition, there has been an increase in longevity for adults and this has resulted in an increase in chronic and degenerative diseases.

Many of the diseases of the second epidemiological transition share common etiological factors related to human adaptation, including diet, activity level, mental stress, behavioral practices, and environmental pollution. For example, the industrialization and commercialization of food often results in malnutrition, especially for those societies in "transition" from subsistence forms of food provision to agribusiness. The economic capacity to purchase food that meets nutritional requirements is often not possible. Obesity and high intakes of refined carbohydrates are related to the increasing incidence of heart disease and diabetes. Obesity is considered to be a common form of malnutrition in developed countries and is a direct result of an increasingly sedentary lifestyle in conjunction with steady or increasing caloric intakes.



A unique characteristic of the chronic diseases is their relatively recent appearance in human history as a major cause of morbidity. This is indicative of a strong environmental factor in disease etiology. While biological factors such as genetics are no doubt important in determining who is most likely to succumb to which disease, genetics alone cannot explain the rapid increase in chronic disease. While some of our current chronic diseases such as osteoarthritis were prevalent in early human populations, other more serious degenerative conditions such as cardiovascular disease and carcinoma were much rarer.

The Third Epidemiological Transition

Today, human populations are moving into the third epidemiological transition. There is a reemergence of infectious diseases with multiple antibiotic resistance. Furthermore, this emergence of diseases has a potential for global impact. In a sense, the contemporary transition does not eliminate the possible co-existence of infectious diseases typical of the first epidemiological transition (some 10,000 years ago) in our own time; the World Health Organization (WHO) reports that of the 50,000,000 deaths each year, 17,500,000 are the result of infectious and parasitic disease. WHO reports that 1.7 million have tuberculosis and 30 million people are infected with HIV.

The emergence of infectious disease has been one of the most interesting evolutionary stories of the last decade, and has captured the interest of scientists and the public. The popular media, with the publication of books such as *The Hot Zone* and movies such as *Outbreak*, has captured the public's fascination with emerging diseases as threats to human survival. There is genuine scientific concern about the problem. David Satcher (Director of the Centers for Disease Control in Atlanta, GA) lists 22 diseases that have emerged in the last 22 years, including Rotovirus, Ebola virus, *Legionella pneumophila* (Legionnaire's Disease), Hantaan Virus (Korean hemorrhagic fever), HTLV I, *Staphylococcus* toxin, *Escherichia coli* 0157:h7,

HTLV II, HIV, Human Herpes Virus 6, Hepatitis C, and Hantavirus isolates.

The emergence of disease is the result of an interaction of social, demographic, and environmental changes in a global ecology and in the adaptation and genetics of the microbe, influenced by international commerce and travel, technological change, breakdown of public health measures, and microbial adaptation. Ecological changes such as agricultural development projects, dams, deforestation, floods, droughts and climatic changes have resulted in the emergence of diseases such as Argentine hemorrhagic fever, Korean hemorrhagic fever (Hantaan) and Hantavirus pulmonary syndrome. Human demographic behavior has been a factor in the spread of dengue fever, and the source for the introduction and spread of HIV and other sexually transmitted diseases.

The engine that is driving the reemergence of many of the diseases is ecological change that brings humans into contact with pathogens. Except for the Brazilian purpuric fever, which may represent a new strain of *Haemophilus influenzae*, biotype *aegyptius*, most of the emerging diseases are of cultural origin. The development of antibiotic resistance in any pathogen is the result of medical and agricultural practices. The indiscriminate and inappropriate use of antibiotics in medicine has resulted in hospitals that are the source of multi-drug resistant strains of bacteria that infect a large number of patients. Agricultural use in which animal feed is supplemented with sub-therapeutic doses of antibiotics has risen dramatically in the last half century. In 1954, 500,000 pounds of antibiotics were produced in the United States; today, 40,000,000 pounds are produced annually.

Conclusion

Recently, much attention has focused on the detrimental effects of industrialization on the international environment, including water, land, and atmosphere. Massive industrial production of commodities has caused pollution. Increasingly there is concern over the health implications of

contaminated water supplies, over-use of pesticides in commercialized agriculture, atmospheric chemicals, and the future effects of a depleted ozone layer on human health and food production. At no other time in human history have the changes in the environment been more rapid or so extreme. Increasing incidence of cancer among young people and the increase in respiratory disease has been implicated in these environmental changes.

Anthropogenic impact from technology has been the pattern since Neolithic times. Within the last 300 years, transportation has played a major role in disease patterns by bringing larger segments of humans into contact with the pathogens at an accelerated rate. The emergence of disease in the New World upon contact with Europeans was a consequence of large sailing ships that became a major mode of transportation. Now it is possible for a pathogen to move between continents within a matter of hours. We live in a time where there exists a virtual viral superhighway, bringing people into contact with pathogens that affect our adaptation. The present pattern reflects an evolutionary trend that can be traced to the beginning of primary food production. The scale has changed. The rates of emerging disease and their impact can now affect large segments of the world population at an ever increasing rate, and we need to be increasingly aware of the implications for today's human populations around the globe.

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George Armelagos is professor of anthropology at Emory University in Atlanta, Georgia. He received his Ph.D. from the University of Colorado in 1968, and his research has focused on diet and disease in human adaptation. A former President of the American Association of Physical Anthropologists, he has authored or co-authored more than 120 books and articles, including Disease in Populations in Transition: Anthropological and Epidemiological Perspective (with Alan Swedlund) and Consuming Passions: The Anthropology of Eating (with Peter Farb).

Kathleen C. Barnes is an instructor at The Johns Hopkins Center for Asthma and Allergy in Baltimore, Maryland. She received her Ph.D. in Anthropology from the University of Florida, Gainesville in 1992 after working as a registered nurse for several years. Her interests include health and disease in the Caribbean.

James Lin is an anthropology and human biology major at Emory University who is interested in health policy research. He plans on entering a MD-PhD program after spending a research year in Japan.

150 YEARS OF NATIVE AMERICAN RESEARCH AT THE SMITHSONIAN

by JoAllyn Archambault and William C. Sturtevant

[**Editor's Note:** Preserving the past for the future has always been an important mission of the Smithsonian Institution. Within this, Native Americans have held a special place from the beginning as contributors and users of knowledge. The Smithsonian, a great repository of cultural, social, and biological information, has often assisted tribal groups in preserving, strengthening, and renewing knowledge of their own culture and history. In turn, native people have been actively involved in major contributions to the research goals of the Institution. In honor of the Smithsonian's 150th anniversary celebration, *AnthroNotes* presents a short overview of the Department of Anthropology's ethnological and archaeological research on the peoples and cultures of the Americas and native participation in these endeavors.]

The Smithsonian Institution was founded by legislation signed August 10, 1846. Almost immediately it became the leading supporter of anthropological research in America. The first Secretary, Joseph Henry, instituted a series of publications called *Smithsonian Contributions to Knowledge* to record "new discoveries in science." Among the earliest volumes was a report on Indian mounds in the Eastern United States, which demonstrated that they had been built by prehistoric Indian societies, not by some unknown non-Indian civilization as many scholars thought. Other reports based on investigations of prehistoric and living Indian societies soon followed. Along with the published reports, the Institution began to acquire a vast collection of manuscript descriptions and recordings of Indian cultures and languages. The U.S. National Museum served as the repository for contemporary and archaeological Native American collections and works of art. Many of these collections were gathered by Smithsonian staff members and other people, including Native

Americans, and are preserved for exhibition and especially for study to benefit all peoples.

Native American research and the Smithsonian grew rapidly, especially after the founding in 1879 of the Smithsonian's Bureau of America Ethnology (BAE), a research unit independent of the U.S. National Museum that specialized in Native American studies, particularly in ethnology and linguistics. The research of the BAE was preserved and disseminated in several ways. The BAE itself archived the manuscript and photographic results of research. The objects collected by the BAE as documents on both living and prehistoric Indian cultures were preserved by the Museum. The BAE published more than 250 volumes describing Native American cultures, languages, prehistory, and history. Much of the information recorded in these volumes and a great deal of the data preserved in manuscripts and photographs archived by the BAE are documented nowhere else. Without active collecting much of this material would have been lost forever as Indian cultures, societies, and languages underwent rapid changes.



In 1965, the staff and archives of the BAE were merged with the museum's Department of Anthropology, whose primary emphasis was then on archaeology and physical anthropology. Today, the Department continues to focus on Native American studies alongside interests in the peoples and cultures of Asia, Africa, Oceania, and South America, and involves all subdisciplines of anthropology (ethnology, linguistics, archaeology, physical anthropology).

Indian Participation

Research and publication on American Indian languages, literatures, history, and social relations depend on contributions by the people who are the bearers of the cultures. To record, analyze, and describe a language, a literature, a traditional history, a religion, or a system of social relations

requires the cooperation and the active assistance of those who speak the language and possess the knowledge and beliefs that are recorded. In some cases, Native Americans write the information and organize it for publication. In other cases they explain to others who serve as recorders and analysts. Archaeology and physical anthropology are less dependent on the active participation of Native Americans although their insight has proven beneficial. The Smithsonian anthropological staff, from its early days, has included distinguished Indian scholars, among the most important being Francis LaFlesche (Omaha) and J.N.B. Hewitt (Tuscarora). Many other Indians were important correspondents and contributors, although not staff members. Among these were Andrew John (Seneca), Phoebe Maddux (Karak), James Murie (Pawnee), Whewa (Zuni), George Bushotter (Sioux), George Washington Grayson (Creek), George Hunt (Tlingit-Kwakiutl), John Squint Eyes (Cheyenne), George Sword (Lakota), Alfred Kiyana (Mesquakie), Henry Tate (Tsimshian), William Jones (Fox), Isabel Meadows (Costanoan), and Seth Newhouse (Mohawk). Scores of individual members of tribes in all parts of North America have contributed knowledge and information that was recorded by Smithsonian staff members and other contributors to the Smithsonian archives and publications. The Department of Anthropology's staff currently includes two archaeologists of Indian ancestry, and the ethnologist director of its American Indian Program is an enrolled member of the Standing Rock Sioux tribe.

One current project of the Department is the 20-volume *Handbook of North American Indians*, an encyclopedia summarizing knowledge of the cultures, history, and human biology of all the tribes of the continent. Indians have been active in planning this reference work and in writing many chapters; three of the volumes have Indian editors. Since 1978, ten volumes have been published, and the rest are in active preparation.



J.N.B. Hewitt (Tuscarora), ethnologist on staff of BAE, with Andrew John (Seneca), a consultant to the Smithsonian and former president of the Seneca Nation in New York, with a group of visiting Canadian Iroquois. Rear, left to right, William Sandy (Cayuga), Hewitt, Alexander Hill (Onondaga), John; front, left to right, William Henry Fishcarrier (Cayuga), Robert David (Cayuga). Photograph by DeLancey Gill at the Smithsonian, Dec. 1901.

Past and Present Research

Smithsonian anthropologists were prominent pioneers advocating Indian rights and respect for Indian cultures and languages and have remained so. "Anthropologists were among the few who felt that Indian cultures had any value in the late 19th century" says JoAllyn Archambault (Standing Rock Sioux), who directs the American Indian Program of the Department of Anthropology. "They felt that Indian lives and culture had meaning. That is why they wanted to document and save the information and images of our people. And they saved them for future generations of every race."

Anthropologists learned from Indian people and tried, quite successfully, to pass on to others what they learned about the richness and variety of Indian cultures, the complexity and sophistication of Indian thought and belief, the great antiquity of Indian settlement of the Americas, and the thousands of years of inventions and adjustments to the environment. They have continually reminded those

who came later how much is owed to their Indian predecessors, and how much was unjustly taken from them.

One of the first Smithsonian anthropologists was Frank Hamilton Cushing, who lived at Zuni Pueblo in New Mexico for four years in the early 1880s. Learning the language, he was adopted by Palowahtiwa, the Zuni governor, and given a ritual position in the Pueblo. Cushing pioneered the anthropological method of participant observation that was reinvented elsewhere in the present century. After he had compiled a valuable record of Zuni culture, he was recalled to Washington because he had defended the Pueblo against illegal taking of its lands by a politically well-connected outsider.

About the same time another Smithsonian anthropologist, James Mooney, began long-term study of the Eastern Cherokee, recording their historical struggle to remain in their homeland. He collected native curing formulas written in Sequoyah's syllabary and studied the ballgames and other features of Cherokee culture. In the 1890s he conducted a first-hand study of the new Ghost Dance in the West, interviewing Wovoka, the founding prophet. Mooney demonstrated the religious nature of the movement in an attempt to convince the U.S. government that it posed no military threat. He then began an extensive study of Kiowa heraldry (manifested in designs on shields and tipis) in Indian Territory, which he soon was forced to give up as a result of his activities defending participants in the Native American Church.

Working in Washington, D.C. in the latter half of the 19th century, C.C. Royce compiled a detailed study of Indian lands lost throughout the country. The maps he prepared, published by the Smithsonian, served some 50 years later as the fundamental evidence by which Indian tribes were recompensed via hearings held by the Indian Claims Commission.

The first scientifically-based and accepted classification of the historical relationships of North

American native languages was published in 1891 under the direction of J.W. Powell, the founder and first chief of the Bureau of American Ethnology. Much of the evidence for that classification is preserved in the Department's archives; some of it is irreplaceable data on languages that have ceased to be spoken.

In the mid-20th century, Smithsonian ethnologist John C. Ewers wrote the standard text used in Blackfeet Indian schools to teach Blackfeet history. Ewers attributes the success of his research to the Blackfeet elders, born in the middle of the last century, who passed on their knowledge to him.

Today, many Tzotzil Indians in Chiapas are producing a literature in their own language, thanks to the literacy program of the Chiapas Writers' Cooperative encouraged and assisted by Smithsonian anthropologist Robert M. Laughlin. Laughlin has devoted 30 years to research in Chiapas, publishing two massive dictionaries of the Tzotzil language. These provide important evidence used in the decipherment of ancient Maya inscriptions that is revealing the history of this Native American civilization. He has also published several volumes of native literature in Tzotzil as well as in English translation.

Ives Goddard recently published *Native Writings in Massachusetts*, two large volumes that contain all known writings in their own language by its speakers, together with new translations into English and annotations on the grammar and vocabulary. This language, extinct since about 1826, was spoken by the ancestors of the present day Wampanoag Indians of Mashpee and Gay Head.

William C. Sturtevant, general editor of the *Handbook of North American Indians*, researched the cultures and history of the Florida Seminoles and New York Senecas and has over the years provided expert testimony in defense of Indian land rights and in support of federal recognition of Indian tribes. The testimony of Smithsonian anthropologists, behind the scenes and in formal hearings before the courts and Congressional

committees, often has proven helpful to Indian communities. Smithsonian anthropologists, known as objective, knowledgeable authorities on Indian history and Indian cultures, have frequently been called on.

The Arctic Studies Center, established in the Department in 1988 by William Fitzhugh, is an extension of research begun in the 1860s in Alaska and the western part of Arctic and Subarctic Canada. Other early Smithsonian research, both ethnological and archaeological, was carried out among Indians and Inuit in the eastern Arctic. The new Center is involved in research, education, and training of native peoples and the coordination of activities with other government agencies. Fellowships and internships in Arctic and Subarctic studies are available to native individuals. Before the establishment of the Center, Fitzhugh organized major exhibitions of Arctic native cultures at the Smithsonian, which then travelled to other locations, including cities in Alaska. A special version was sent to rural locations making available to Alaskan natives aspects of their own history. Assistance to native museums is a continuing interest of the Arctic Studies Center.

The National Anthropological Archives is the repository for manuscript records on Native American and other cultures and languages, for many thousands of historical still photographs of American Indian subjects (except the photographs of objects in the Smithsonian collections), and for the papers of Indian and anthropological organizations. The core of the Archives are the records and photographs collected by the former Bureau of American Ethnology and the museum department since its beginnings.

The Human Studies Film Archives collects and documents ethnographic moving picture film and video records. It also serves as a clearinghouse for Native American film and video produced by other organizations and makes films and videos available to Indian communities.

The American Indian Program

The American Indian Program of the Department of Anthropology was founded in 1986 to coordinate and increase Native American involvement with the Department. The Program provides outreach to Indian communities and individuals, making the Department more accessible to native people. It encourages research, collection of contemporary Indian objects, exhibitions, and public programming by and about native people. It has initiated numerous programs with reservation based community colleges, tribal museums, tribal education departments and elder groups. Fellows in the American Indian Program are very diverse in age, experience, background, and interest. Their projects have been equally diverse ranging from film research to object collection research by artists to inform their art making. The results of their projects are now used in various community activities in urban and reservation areas. Most recently a group from the Coquille reservation in Oregon found thousands of pages of relevant materials in Washington, had them copied, and has deposited the copies in a local archives where they can be used by tribal members for their own personal research. Several tribes have obtained language materials from the National Anthropological Archives for use in their language programs. Others have used historical photographs to enhance exhibits created for their tribal museums. The Program provides technical assistance to tribal museums and cultural programs upon request.

In July 1997, the Department of Anthropology will celebrate its 100th anniversary, looking back with pride on the Department's many contributions. At the same time, the Department is embracing the future, as the field of anthropology continues to change and with these changes emerge new relationships with Native peoples.

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TAKING IN THE SITES: Anthropology on the Web for K-12

by Margaret R. Dittmore

The Smithsonian's Anthropology Department defines anthropology as "the science that deals with the origins, physical characteristics, and cultural development of humankind" (<http://www.nmnh.si.edu/departments/anthro.html>). The broad scope of this definition means exploring the Internet for related resources can be both exciting and a little daunting. The Internet's tremendous growth in size and popularity has resulted in the need for assistance in navigating it. Offering that help is the immensely popular World Wide Web with which one can locate and retrieve text, pictures and sounds utilizing user-friendly graphics-based point and click browsers. The following list of Web sites is a small sample of what the Internet holds for students and teachers interested in the field of anthropology. It is limited to a few sites (almost entirely U.S.) in each chosen category. Brief annotations highlight their holdings.

A word of caution: At present there are no gatekeepers (e.g., editors, publishers or systems of peer review) for much of what is on the Internet. Sites can be developed by anyone who has the equipment and know-how. As a result, the quality of information is varied. The following sites were selected with this in mind; however, we can not attest to the accuracy of everything presented.

GENERAL SOURCES

Below are several listings of linked resources, sometimes referred to as homepages or virtual library indexes, which will give the reader easy access to those not listed here. They include **Anthropological Resources on the Internet** (<http://www.nitehawk.com/alleycat/anth-faq.html>); European equivalent is <http://lucy.ukc.ac.uk/afaq.html>); **AnthroNet** (<http://darwin.clas.virginia.edu/~dew7e/anthronet>); and **WWW Virtual Library: Anthropology** (<http://www.usc.edu/dept/v-lib/anthropology.html>). Another recently updated

source is the **Anthropology InfoGuide** on the ERIC (Educational Resources Information Center) network (<http://ericir.syr.edu>. Select the Virtual Library). The InfoGuides point K-12 educators to Internet, ERIC, and traditional print information resources on a host of topics. Finally, the Smithsonian's **Office of Elementary and Secondary Education** is also an excellent resource and includes the publication "Smithsonian Resource Guide for Teachers." (<http://educate.si.edu/intro.html>)

ARCHAEOLOGY

To date, archaeologists are the most active on the Internet. There are hundreds of sites to explore! A small sample follows.

***Frequently Asked Questions About A Career in Archaeology in the United States.** Answers questions about education and training, jobs, how to volunteer for a dig, etc. A list of introductory materials (both print and electronic) is also available. (<http://www.museum.state.il.us/ismdepts/anthro/dlcfaq.html>)

***Archaeology Resource Menu.** Extensive listing of linked resources for study/teaching of archaeology. Glossary of terms and a great "Middle School Archaeology Web Unit" included. (<http://www.interlog.com/~jabram/elise/archmenu.htm>)

***Links to the Past.** Information on our collected heritage, participation in archaeology, tools for teaching, and visits to national parks and the lower Mississippi delta moundbuilders (National Park Service). (<http://www.cr.nps.gov>)

***Flints and Stones: Real Life in Prehistory.** Introduction to the world of late Stone Age hunter gatherers through an exhibit of some of Europe's inhabitants and a visit with a shaman. Discuss some misconceptions about the Stone Age, including when these people actually lived. Take a "food quiz" to see if one would survive. (<http://www.ncl.ac.uk/~nantiq/menu.html>)

***Exploring Ancient World Cultures.** An introduction to eight ancient cultures, including the Near East, India, Egypt, China, Greece, Rome, early Islam, and medieval Europe. An "Educator's Resource Page" is available. (<http://eawc.evansville.edu/index.htm>)

***Archaeological Resources Guide for Europe.** A virtual library of European archaeology with over 1,000 links to current work and information resources across Europe! Access is by subject, country (over 30 represented), period, or by database search. (<http://www.bham.ac.uk/BUFAU/Projects/EAW/index.html>)

***Southwestern Archaeology.** Billed as the "type site" for Web archaeology in the Southwest. Includes a reading list, health and safety tips for field archaeologists, and lots of information on sites, museums, collections, institutes, maps, laws, and programs of study accessible by state. (<http://seamonkey.ed.asu.edu:80/swa/>)

***The Inca Trail and Machu Picchu.** A virtual trip up the Inca Trail to Machu Picchu complete with day-by-day descriptions and photographs. (<http://www.tardis.ed.ac.uk/~angus/Gallery/Photos/SouthAmerica/Peru/IncaTrail4.html>)

SOCIAL/CULTURAL ANTHROPOLOGY

***Kinship and Social Organization: An Interactive Tutorial.** A basic guide to concepts of kinship, terminology used, systems of descent and marriage, and residence rules. Diagrams illustrate each. Includes ethnographic examples. (<http://www.umanitoba.ca/faculties/arts/anthropology/tutor/fundamentals.html>)

***Folklife Home Pages.** The Library of Congress's American Folklife Center Home Page (<http://lcweb.loc.gov/folklife>) offers a Folklife information service with national events, jobs, and training opportunities. Also, an excellent essay titled "American Folklife: A Commonwealth of Cultures." Smithsonian Center for Folklife

Programs & Cultural Events (<http://www.si.edu/organiza/offices/folklife/>) features great access to Folkways recordings, including audio samples, and Vfest (Virtual Festival in American Folklife), a cultural celebration in cyberspace.

***Native American Sites.** Access to home pages of individual Native Americans, Nations and other sites about American Indians. (<http://www1.pitt.edu/~lmitten/indians.html>)

PHYSICAL ANTHROPOLOGY

***The Jane Goodall Institute.** Committed to wildlife research, education and conservation. Information about international education programs for youth. (<http://www.gsn.org/gsn/proj/jgi/index.html>)



***Primate Info Net.** Homepage of the Wisconsin Regional Primate Research Center, University of Wisconsin, with links to information resources on primates, primate studies, conservation, etc. Also available are "Primates as Pets," "Primatological Resources for Children and Young Adults" and ASKPRIMATE, an e-mail based reference service. (<http://www.primate.wisc.edu/pin/>)

***Origins of Mankind Homepage.** Recently redesigned, this is an extensive listing of internet resources for the study of human evolution. It includes general origins, sites, theories, online books, prehistoric art and monuments, labs and museums, newsgroups and directories to other sites. (<http://www.dealsonline.com/origins>)

LINGUISTICS

***Ethnologue: Languages of the World.** Catalog of the world's languages with information on alternate names, number of speakers, location, dialects, linguistic affiliation, etc. Browse by country (interactive maps), language family, or any word found in text. 12th edition (1992). (<http://www.sil.org/ethnologue/ethnologue.html>)

***Human-Languages Page.** Language-related resources, including online language lessons, translating dictionaries, academic programs, and other linguistic and commercial resources. (<http://www.willamette.edu/~tjones/Language - Page.html>)

AREA STUDIES

***University of Pennsylvania African Studies Homepage.** Extensive listing of resources for the study of Africa. Includes a very good unit titled "K-12 Electronic Guide for African Resources on the Internet." (http://www.sas.upenn.edu/African_Studies/AS.html)

***Arctic Studies Center.** Activities of Smithsonian anthropologists both in and related to study of the far North. See what it takes to put an exhibit

together, tour a virtual exhibit and an archaeological site, and participate in a repatriation workshop with Alaskan Natives. (<http://www.nmnh.si.edu/arctic/>)

***Asian Studies WWW Virtual Library.** Extensive listing of linked resources for the broad sweep of Asia, including the Middle East and the Pacific. Searchable by region, by 60 different countries/territories, or for Asia-Pacific global data. ([http://coombs.anu.edu.au/WWWVL-Asia n Studies.html](http://coombs.anu.edu.au/WWWVL-Asia_n_Studies.html))

***Lanic: Latin American Network Information Center.** Information on 29 countries and 30 different subjects, including anthropology and K-12. Administered by the University of Texas. (<http://lanic.utexas.edu/>)

MUSEUMS

Museums have found the Internet. (See **Guide to Museums and Cultural Resources** (<http://www.lam.mus.ca.us/webmuseums/about.html>) administered by the Natural History Museum of Los Angeles County.) Although many museums have simply produced pages with information about their facilities, hours, etc., others are offering more. For example:

***Canadian Museum of Civilization.** Offers free virtual membership and selective virtual tours of exhibits. Featured are Canada's First People, the British Columbia Coast, a Children's Museum, and Behind the Scenes, etc. (<http://www.cmcc.muse.digital.ca/>)

***Museum of Anthropology, University of Michigan.** A major archaeological research and teaching facility as well as its collections not normally open to the public. Select from among eight curation divisions--ethnology, ethnobotany, Asian, Great Lakes, North America, Old World, New World and Physical. (<http://www.umma.lsa.umich.edu/umma.html>)

***Oriental Institute Virtual Museum.** Showcase of ancient Near Eastern history, art, and archaeology at the University of Chicago. Virtual tours available by subject, gallery or other part of the museum. View highlights from the collections by region (e.g., Anatolia, Egypt, Mesopotamia) and topic (e.g., mummies). (<http://www-oi.uchicago.edu/OI/MUS/QTVR96/QTVR96.html>).

***Smithsonian Institution.** A treasure-trove of resources! Don't miss the **Department of Anthropology** (see introduction), the **Human Studies Film Archives** (<http://www.nmnh.si.edu/gopher-menus/HumanStudiesFilmArchives.html>) or the **National Museum of the American Indian** (<http://www.si.edu/nmai/nav.htm>).

VIRTUAL EXHIBITS

The Internet is a great place for exhibits. Such online displays offer many museums a way to showcase their collections to a wider audience and give all of us an opportunity to share in these experiences. Several current sites include:

***Greek World Virtual Exhibit.** Based on the University of Pennsylvania Museum of Archaeology and Anthropology's permanent exhibit, this site uses artifacts to provide a vivid portrayal of ancient Greek life, including the home, warfare, trade and religion. (http://www.museum.upenn.edu/Greek_World/Intro.html)

***Scrolls from the Dead Sea: The Ancient Library of Qumram and Modern Scholarship.** Based on the Library of Congress exhibit. Includes images of 12 scroll fragments and 29 objects, a description of the Qumran Library and its community and a discussion of the scrolls today, 2,000 years later. Also available are "Resource Materials for Teachers." (<http://sunsite.unc.edu/expo/deadsea.scrolls.exhibit/intro.html>)

***Exhibits On-line.** Selected online exhibits from the Peabody Museum of Archaeology and Ethnology (Harvard University), which houses

prehistoric and historic collections from all over the world. Currently featured are **Against the Winds: American Indian Running Traditions**, **Three Generations of Women Anthropologists**, and **The Children of Changing Woman**. (<http://fas-www.harvard.edu/~peabody/maria/index.html>)

ELECTRONIC PUBLICATIONS

At present only a few anthropological periodicals have attempted full-text online. (For example, see online version of **AnthroNotes**.) Instead, the majority offer information about the journal, how to subscribe or submit an article, and tables of contents for recent issues (some with abstracts of articles). An example is the journal **Archaeology** (<http://www.he.net/~archaeol/>) that also has an excellent set of links to archaeology around the world. For an example of online text, see John C. Ewers' **Hairpipes in Plains Indian Adornment** (<http://www.sil.si.edu/elecedns.htm>) published by the Smithsonian Institution Libraries as part of a larger electronic publishing project.

PROFESSIONAL ASSOCIATIONS

A growing number of professional organizations are discovering the Internet as a good way to reach out to their membership and to advertise to new and interested others. Among them are the **American Anthropological Association** (<http://www.ameranthassn.org/>) whose homepage is currently under construction and the **Society for Historical Archaeology** (http://www.azstarnet.com/~sha/sha_ha2.htm), which has special sections on what historical archaeology is, careers and graduate programs in the field, and information for kids titled "Kids! Is the Past in your Future?"

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AnthroNotes offers in-depth articles on current anthropological research, teaching activities, reviews of new resources, and an annual article on summer fieldwork opportunities. *AnthroNotes*, originally part of the George Washington University/Smithsonian Institution Anthropology for Teachers Program funded by the National Science Foundation, is published free-of-charge, three times a year (fall, winter, and spring).

AnthroNotes has a three part mission:

- 1) to more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
- 2) to help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of curriculum subjects; and
- 3) to create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

To be added to the mailing list, write: Anthropology Outreach Office, NHB 363 MRC 112, Smithsonian Institution, Washington, DC 20560. This newsletter with its cartoons may be reproduced and distributed free-of-charge by classroom teachers for educational purposes. *AnthroNotes* is now available on America Online (keyword: Smithsonian→Publications→Natural History Publications).

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GLOBAL CULTURE CHANGE: NEW VIEWS OF CIRCUMPOLAR LANDS AND PEOPLES

by William W. Fitzhugh

For many years anthropologists believed that Eskimos were the isolated descendants of Ice Age hunters, marginal refugees whose Paleolithic cultures had been preserved for thousands of years in a kind of cultural deep freeze.

In recent years, a quite different view of arctic cultures has emerged, challenging this "relic of the past" theory with a new view of circumpolar history as a unique and dynamic adaptation to a relatively "friendly" arctic---if you know how to live there. The cultural similarities among native peoples on either side of the Pacific Basin, from Siberia to Alaska and the Columbia River, and across the North American arctic to Canada and Greenland, demonstrate a long and complex history of culture contact, migrations, and exchange in arctic regions, and provide a new perspective on the question of the "independent" history of the Americas. Seen from a global, circumpolar perspective, arctic and subarctic regions and their adjacent coasts are increasingly perceived as longstanding "highways" rather than as barriers to the flow of plants and animals, peoples and cultures. Today we recognize Siberian influence in several early Alaskan cultures, and Bering Strait sources are known for many features of Eskimo cultures found across the Arctic.

First Contact

Slightly more than one thousand years ago, Norsemen from Scandinavia crossed the North Atlantic and discovered Greenland and North

America. They found these new lands cold and bleak and were surprised to discover them inhabited by "skraelings," whom they described as semi-human creatures with one leg and screeching voices. Five hundred years later Englishman Martin Frobisher reached Greenland and Baffin Island (1576-78) while searching for the Northwest Passage. Frobisher too met native Inuit, but despite their skin clothes and animal-like sod house dwellings, he noted they were shrewd traders and crafty warriors, not afraid to die for their homes or their freedom. Frobisher managed to capture several Inuit, bringing them home to present to Queen Elizabeth I as "tokens of possession" of new lands claimed for England. Lacking resistance to European diseases, these people soon died, but their Asian features and metal tools suggested Frobisher had, indeed, discovered the threshold of the fabled Northwest Passage to Asia.

Early descriptions of arctic peoples also were recorded in the European arctic. According to an Old English text, Ohthere, an intrepid Norse chieftain of the late ninth century, described the Saami (Lapp) peoples of northern Scandinavia in fearsome terms. He and other travelers reported meeting Russian arctic peoples with powerful sled dogs and boats made from the skins of seals.

Today we know these northern peoples as Inuit (Eskimos) in North America and the western side of Bering Strait; Chukchi, Yukaghir, Dolgans, and Nenets inhabiting Siberia; and Saami (Lapps) living

in Scandinavia. Occupying similar arctic lands for thousands of years, these various peoples developed similar cultures, using skin and feather clothing, harpoons, dog and reindeer sleds, oil lamps, underground houses and skin boats. Many of these people shared shamanistic beliefs and nearly identical folktales of Raven and the aurora borealis.

Who were these arctic peoples who so fascinated European explorers and travelers? What was their origin and history? Did they come from a single people who spread eastward from northern Europe around the northern rim of the globe, or did they undergo convergent development following independent origins in different areas of the North?

Early anthropologists explored these questions in two ways. The first was by trying to connect the cultures of living arctic peoples to the early hunting cultures of Paleolithic Europe; the second was by exploring similarities and differences among living arctic peoples, in the hope of identifying living traces of the earliest "original" arctic people.

Eskimo Origins

The search for Eskimo origins began with Martin Frobisher and Europe's introduction to Frobisher's Inuit. Northern lands were indeed hostile to inexperienced arctic navigators like Frobisher, and they were decidedly so for Sir John Franklin, who lost his life, his ships, and his crew exploring the Northwest Passage in Arctic Canada in the 1840s. Such events influenced how Euroamericans imagined arctic lands -- as hostile to human life -- and the history of its peoples as remote from the centers of developing civilizations. Generations of scholars came to view the Arctic as a refuge, where Ice Age peoples with their cultures had migrated and then survived down to the present, in a kind of cultural and biological deep freeze.

Encouragement for this view came from the mid-19th-century discovery of European Paleolithic sites containing harpoons for hunting sea mammals, throwing sticks for hurling spears, ivory figurines, pictographic art, and shaft-straighteners -- all nearly identical to tools known from historic Eskimo cultures and their Thule culture archeological

ancestors in Greenland, Canada, and Alaska. It seemed logical to archaeologists that the Eskimos, for whom these similarities were most striking, were the direct descendants of European Paleolithic reindeer hunters who had retreated north, following the melting ice and the northward movement of animals at the end of the Ice Age. The discovery of cave paintings depicting Ice Age hunters whose prey included reindeer and other arctic animals only confirmed this view. The Eskimos, it was believed, had preserved the remnants of an ancient Ice Age culture even to the modern day, hunting sea mammals, caribou, musk-ox, polar bears and other arctic game.

But not all arctic peoples lived this way.

The peoples of the Russian arctic in historical times were reindeer herders, not sea mammal hunters, and they practiced a northern variant of animal domestication. Even though their reindeer were not completely tame, and could easily be lost if a herder was not attentive, reindeer herding provided a margin of safety for Eurasian arctic peoples missing in the North American arctic. The implications of this new economy were enormous. A careful herding family did not need to worry where their next meal would come from and could devote energies to other activities, like trading furs for European or Chinese goods, metal-working, and exchanges with far-flung tribes. In time the reindeer herding culture expanded from central Eurasia west into Scandinavia and east to Bering Strait, transforming cultures in its path, exterminating wild reindeer (caribou), and imposing a near mono-culture economic system throughout much of the Eurasian arctic.

Interestingly, reindeer herding reached Bering Strait about 1000 years ago but never entered Alaska. Some Eskimo peoples on the Siberian side adopted reindeer breeding, while others continued to live as sea mammal hunters. In this instance, Bering Strait was both a geographic as well as an ethnic barrier, for none of the American Eskimos adopted reindeer breeding. The rich maritime economy of Bering Strait offered a hearty subsistence for Eskimo peoples who lived there, and when reindeer fur was needed for clothing it could be obtained from the

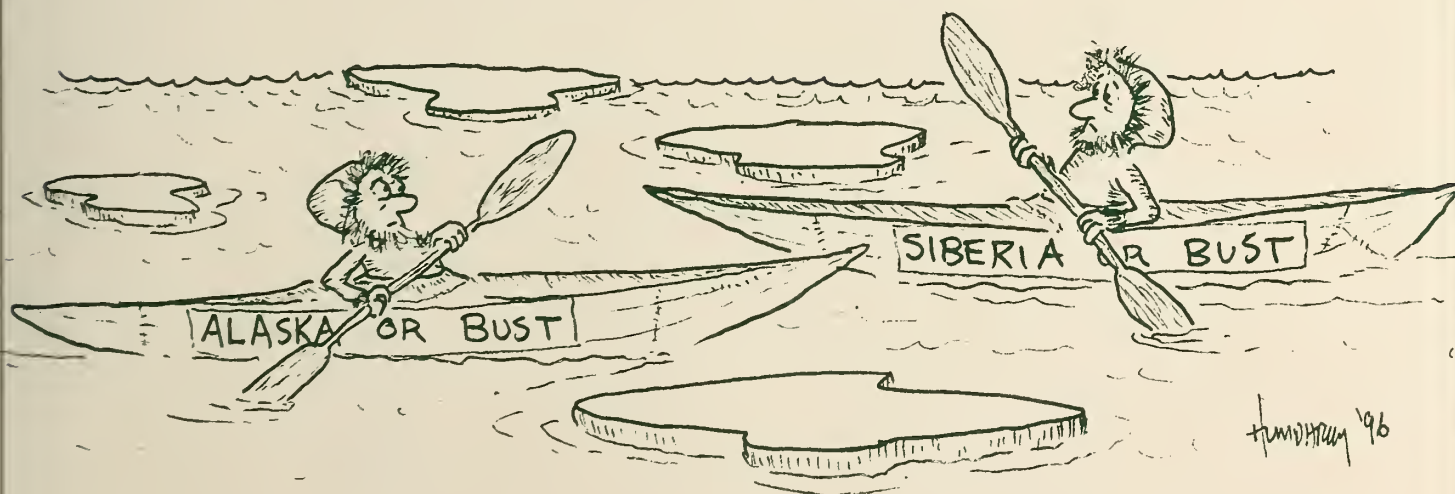
Siberian Chukchi. The spread of reindeer herding peoples and the revolution of reindeer herding that spread through the Eurasian arctic never entered the New World, and the Eskimo and northern Indian peoples there continued to hunt wild animals as they had for thousands of years. It is only in this sense that North American arctic peoples can be said to have preserved an ancient hunting tradition and religious beliefs whose roots can indeed be traced to Ice Age times.

Today, archaeological methods have replaced ethnographic parallels in determining the history of arctic peoples, including Eskimos. At the same time, archaeological interpretations of the evidence of extinct cultures are influenced by the description and analyses of ethnographic (both historical and modern) cultures around the world, as knowledge of known cultural systems help fill in the inevitable gaps in archaeological evidence. After nearly one hundred years, archaeologists are confident that the Bering Sea region was the birthplace of Eskimo culture. But beyond this, there is disagreement as to exactly where this culture first developed; eastern Siberia, Kodiak Island, the Alaska Peninsula and Western Alaska are all still in the running. Resolving this question will not be easy because post-glacial submergence, tidal waves, and earthquakes have destroyed much of the coastal zones inhabited by these early cultures, making archaeological investigation of many key areas impossible.

North Pacific Rim Peoples

The distinction across the North Atlantic between the herding Eurasian and the hunting North American arctic peoples stands in marked contrast to the cultural and economic similarities among the peoples living along both shores of the North Pacific Rim. The North Pacific Rim peoples, furthermore, provide a fascinating case study of culture contact and change through time. Ironically, it was along the Pacific Rim, where Native peoples had been in contact for millennia before Europeans arrived, that the recent 20th-Century history of political antagonisms masked the very real and very long continuities of cultures. Due to 19th-century Russian exploring expeditions to Russian America (Alaska), early ethnographic collections from Alaska ended up in museums in St. Petersburg, Russia, while eastern Siberian collections made by Franz Boas' Jesup Expedition of 1897-1902 ended up in New York, at the American Museum of Natural History. Fortunately, now there are few physical or political barriers to the exchange of information, peoples, and materials across the Bering Strait, and joint exhibition projects like the Smithsonian's 1988 "Crossroads of Continents" could reassemble these collections from their places of origins.

The Smithsonian's "Crossroads" exhibition combined cultural materials from northeastern Siberia and northwestern North America into a single joint traveling exhibition seen by peoples on



both sides of the Bering Strait. A smaller version of the "Crossroads" exhibit, with strong local education components and many miniature artifacts made originally as toys and models, toured villages throughout Alaska in 1993-95, and a Russian language version now is traveling in the Russian Far East.

Peopling the New World

Archaeologists investigating the history of cultures around Bering Strait have found clear evidence of the movement of Asian peoples into northeastern Siberia and their subsequent migration into Alaska and the Americas. Dates from stratified cave sites along the Aldan River, a tributary of the Lena, in the Sakha Republic (formerly Yakutia) begin as early as 35,000 years ago. Comparable dates are known from sites in northern Japan. Confirmation of the northeastern movement of peoples and acquisition of arctic adaptation is seen in the trend of archaeological dates upward toward 12,000 BP as one approaches Bering Strait. At about this time, settled riverside fishing villages also appear on the lower Amur River and in Kamchatka. In both cases data indicate seasonally settled villages, and sites on the Amur contain some of the earliest ceramics in the world---fired clay animal figurines and grit-tempered pottery have been recovered.

At about this time, ca. 12,000 years ago, the first well-dated stratified sites appear in Alaska on the Nenana River and in a number of other locations, both on the interior and on the coast. Almost instantaneously, sites of this age also appear at many sites in North and South America, indicating a very rapid southward movement of peoples from Alaska. Although pottery and pithouse villages have not been found in the earliest Alaskan sites, the presence of sites at both coastal and interior locations document adaptation to a wide range of environments.

The cultures of these earliest Siberian and Alaskan peoples were very similar. Although the early fluted (Clovis-like) points known from northwestern Alaska have not been found in Siberia, these early Siberian-American Paleoarctic peoples employed similar bifacial and microblade (core and blade)

technologies and clearly shared a common cultural tradition. Unlike the earliest Siberian ancestors, who followed a more nomadic hunting way of life, post-12,000 BP coastal peoples had already begun to turn their attention to the more abundant and stable resources of the sea.

By 10,000 years ago this maritime-focused economy was present along both the Siberian and American sides of the North Pacific from Japan to Alaska, and to British Columbia and Washington State, in a giant arc connecting the two continents. The northernmost section of this North Pacific culture area was occupied by the ancestors of present-day Yupik Eskimos and Aleuts in Western Alaska and of several Native nations in northeastern Siberia: Koryak, Itelmen, Chukchi, Nivkh, and Asiatic or Siberian Eskimos. Ancestral cultures leading to these ethnographic peoples have been documented throughout this region. Although details of this development are best known from North American sites, a comparable sequence is emerging as archaeological work expands in Siberia. Throughout the region, the trend in coastal regions was toward increasing sedentism and intensive exploitation of marine resources, and reached its peak in the early historical period.

These North Pacific developments also appear to have stimulated adaptation of peoples to the icy coasts and arctic interior regions north of Bering Strait. One prominent theory holds that early Eskimo-like cultures, originating as maritime-based cultures in Kodiak and the Aleutian Islands, spread north along the Alaskan coast as the land bridge was inundated after 11,000 years ago, and became adapted to arctic regions. About 4500 years ago the North Alaska hunting peoples received impulses from Siberian Neolithic cultures, resulting in the Alaskan Denbigh and Arctic Small tool tradition cultures. These groups, in turn, expanded eastward into the recently ice-freed Canadian Arctic, reaching Greenland and Labrador by 4000 years ago, making this the last major area of the New World to be colonized permanently by humans.

As Igor Krupnik has described in his essay "Native Peoples of the Russian Far East," in the catalog *Crossroads Alaska*, the historic Siberian Eskimo

and Chukchi inhabitants of the Bering Strait region shared a number of cultural adaptations growing out of an economy based on hunting for sea mammals, either from boats or on ice, hunting for land mammals and birds, and fishing. They mastered the art of dog-sled driving and built sophisticated boats of skin and wood propelled by paddles and sails. When they settled on the coast they gathered in permanent villages, consisting of sod houses or dugouts in winter, skin or birch-bark tents and wooden plank houses in summer. Evidence of ancient origins for their elaborate rituals and community festivals, which included decorated fur and gutskin clothing, skin drums, wooden masks, and ivory carvings, have been found in the Old Bering Sea cultures of this region as early as 2000 years ago.

In Siberia, about 2000 years ago, those peoples who did not move to the coast preserved their original nomadic lifestyle of hunting and fishing, and developed a distinct cultural pattern focusing on the domesticated reindeer. "Mastering reindeer herding was the second most important economic revolution for Siberian Native people, after mastering the resources of the sea" (Krupnik, p. 23). As should be clear by now, cultural similarities abound on either side of the Pacific Basin. Sites from both Siberia and Alaska contain early forms of microblade technology. Sites from later times show similarities in Neolithic microblades, ceramics, and architecture. Many of these similarities, like whalebone-semi-subterranean housing, can be traced eastward into Canada and Greenland. Others, like the distinctive Old Bering Sea, Okvik, and Ipiutak art styles, remain rooted in the Bering Strait region. What is less clear is whether these similarities developed from deep cultural strata accumulated from the cultural residues of shared history before the peopling of the New World, or are they, instead, the result of more recent contact and exchange?

Detailed archaeological comparisons and dating have revealed that many of these similarities resulted from historical contacts. As noted above, we can trace the eastward spread of Paleolithic core and blade technology into Alaska from Siberia about 12,000 years ago. Similarly there appears to have

been a dispersal of Siberian Neolithic blade industry into Western Alaska, Canada, and Greenland at 4500 BP, and of Asian ceramics into Alaska ca. 2000 years ago. But, are the advent of intensive maritime adaptation and the use of seasonal pithouse villages local adaptations or introduced phenomena? And what can be said of Old Bering Sea burial ritual and art? While many of these developments reflect local adaptations and trends, external impulses often had dramatic effects, as seen by dramatic Siberian shamanistic influences in Ipiutak burial ritual at Point Hope, Alaska, ca. A.D. 500.

Global Aspects of Culture Contact and Exchange

Exploration of culture contact and exchange in arctic regions provides a new and different perspective on the question of the "independent" history of the Americas. As new data begin to emerge from these relatively unknown northern lands (especially from Northeast Asia), evidence for a continuing history of Beringian exchange is mounting.



The circumpolar region can be seen as a natural pathway for the movement of peoples and ideas between Asia and the Americas. Before A.D. 1000-1500, it was the only conduit we can document through which Asian and American populations interacted. Whether such interaction was initiated by historical and cultural forces of evolution, technological development, population growth, or from the indirect influence of climatic change or animal movements, the circumpolar region with its Bering Sea zone has been the sole point of contact and transmission between the New and Old Worlds. In this sense northern regions have played a unique role as buffer and transmitter of trans-continental historical forces. Most of these seem to have flowed from the centers of more complex cultural development in Asia into the New World. Few, if any, traces of American cultures seem to have influenced Siberian or East Asian culture history.

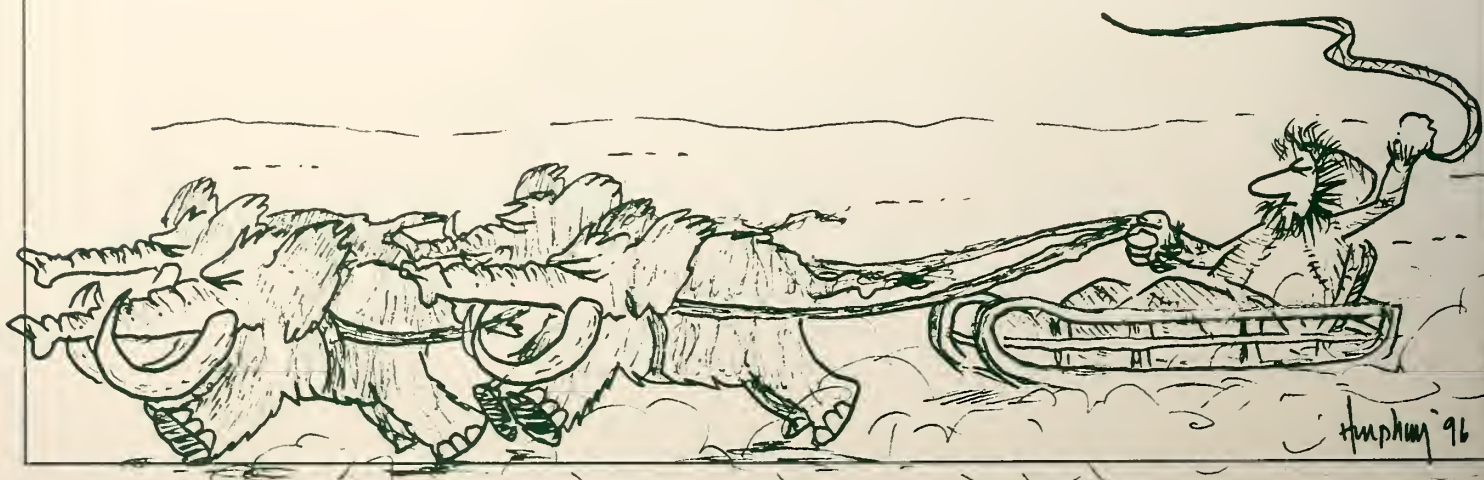
The Latitudinal/Longitudinal Perspective

The circumpolar distribution of clothing styles, blubber lamps, harpoons, skin boats, shamanism, bear ceremonialism, and mythology are striking reminders of common elements in the ethnographic cultures of northern peoples. A comparable suite of common features has been identified in archaeological cultures of this region: persistence of early core and blade industries; ground slate technology; wrench-like shaft straighteners; hunting art employing skeletal and joint-mark art, and others. Mechanisms of culture contact and exchange are visibly recognizable; migration and diffusion in the sparsely-populated expanses of northern regions are well documented in historical literature, in ethnographic and linguistic continuities, and in

archaeological evidence. The Eskimo peoples and cultures rapidly expanded into the Canadian Arctic, first about 4000 years ago, and later with the whale-hunting Thule migration at A.D. 1000. Reindeer breeding and herding occurred throughout the Eurasian arctic and boreal regions during the last 1500 years. Cultural features---including art styles, iron technology, glass beads, and tobacco---moved rapidly from Siberia into North America. All of these exemplify the existence of latitudinal global conduits and channels for forces of culture contact and change.

Contrasting the circumpolar latitudinal homogeneity is the longitudinal, environmental, and cultural diversity that occurs in both Eurasia and North America on the north-south axis. Throughout history we have seen the increasing divergence in levels of cultural development and complexity between the tropical and temperate regions on the one hand and boreal and arctic regions on the other. State development processes and formation of civilizations have been at work in southern Eurasia and Central America for thousands of years, always expanding northwards, transforming northern peoples. In the North, environmental conditions and the persistence of a "big game hunting" tradition encouraged the persistence of Paleolithic and Mesolithic hunting traditions and technology into the 20th century.

One of the more remarkable features of this persistence is the recent discovery that dwarf mammoths existed in some regions of the Eurasian arctic nearly 5000 years longer than elsewhere in the world. Paleontological remains of a miniature type of mammoth on Wrangel Island, one hundred miles



north of the Chukotka coast, demonstrate a Pleistocene "refugium" until 4500 years ago or even later. The discovery by Russians of archaeological sites at Chertov Ovrag (Devil's Gorge) on Wrangel dating to 4000 years ago raises questions of possible human intervention in the ultimate demise of this great Ice Age mammal.

Impact of the Modern World

Several dramatic changes have taken place in recent years in the Arctic. Indigenous populations have expanded, but while growing rapidly, they are now a minority in their homelands in all but a few locations. Native subsistence economies have changed under the pressure of modernization, commercial exploitation and governmental policies. A number of ethnic groups described by 19th century anthropologists, including the Sadlermiut of Hudson Bay, the Eyak of southeast Alaska, and the Aliutor of Kamchatka have become extinct. Of the eight North American Eskimo languages known historically, only three---Greenlandic, Inuktitut, and Yupik--- will survive into the mid-21st century. The cultural diversity and integrity of much of the region is equally threatened.

As the world approaches the end of the 20th century and faces a new millennium, scholars and the public alike are concerned with the dramatic outcomes of the past century and the legacy it will leave to future generations. Environmental degradation, pollution, and loss of species and ecosystem integrity are issues of major concern. A similar set of concerns is expressed by both the general public and social scientists regarding human cultural diversity and the rights of indigenous people. Paternalistic governmental policies, industrialization and the spread of consumerist values have damaged indigenous subsistence and languages and distorted their cultural continuity and ethnic diversity.

During this century thousands of Siberian, Alaskan and Northwest Coast Natives abandoned their traditional lifestyles and joined the modern workforce in increasingly industrialized urban settings. Huge numbers of outsiders immigrated into their territories, bringing demographic, social and political change. Entrepreneurism, business

interests and military policies have made major impacts on both human and natural environments. While many groups continue to live in their homelands, most have lost their Native languages, adopted imported religious beliefs, and rely on modern technology.

In Siberia equally dramatic changes have taken place. State-controlled hierarchies have dictated policy; floods of recruited and imprisoned outsiders have arrived; and some Native groups have been deprived of traditional livelihoods, while others involved in state-owned reindeer herding, peltfarming and fishing have been artificially subsidized. Official policies of "russification" and relocation have reduced the viability of Native life and economy. State-controlled industrial development has had a devastating impact on land and resources over which Native people have had little control.

Despite differences in political systems, in many respects the results of 20th century developments in Siberia and northwest North America have produced surprisingly similar results. In both areas Native people have lost much of their ability to direct their own futures; languages have been weakened or lost; poverty has increased; subsistence economies have been weakened; and alcoholism and social disorders have become serious problems. In both areas cultural and language survival, Native rights, education policy, and economic and political issues loom as major problems for the future.

Conclusion

After five centuries of a dominant "Atlantic" perspective on world history and politics, we are entering an era in which Pacific resources and relations are assuming an ever more important role in world affairs. Viewing the globe from a circumpolar perspective becomes ever more important, while understanding the lands, peoples and cultures of the North Pacific Rim can provide immense benefits to northern peoples, and to public and scientific understanding of a little known but increasingly important part of the world. As our understanding increases through scientific research and public dissemination, new perspectives on the

Circumpolar Arctic in general, and the North Pacific Rim specifically, should help prepare younger generations to live in an increasingly global world. Arctic regions and peoples are part of that world. In fact, they may be the most "global" of all!

For Further Reading:

Chaussonnet, Valerie. *Crossroads Alaska. Native Cultures of Alaska and Siberia*. Arctic Studies Center, National Museum of Natural History, Smithsonian Institution Press, 1995.

Fitzhugh, William W., and Valerie Chaussonnet (eds.). *Anthropology of the North Pacific Rim*. Washington, DC: Smithsonian Institution Press, 1994.

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Fitzhugh, William W., and Susan Kaplan. *Inua: Spirit World of the Bering Sea Eskimo*. Washington, DC: Smithsonian Institution Press, 1982.

Krupnik, Igor. *Arctic Adaptations: Native Whalers and Reindeer Hunters of Northern Eurasia*. Hanover and London: University Press of New England, 1993.

William W. Fitzhugh is the Director of the Arctic Studies Center and Curator in the Department of Anthropology, National Museum of Natural History, Smithsonian Institution.

EXPLORING THE ANCIENT WORLD

This new series, edited by Jeremy A. Sabloff and published by Smithsonian Books, is an excellent addition to any school library or classroom. The eight books (176 pages each) in the series include:

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Pyramids by Flora Simmons Clancy discusses the functions, meanings, and construction of Egyptian pyramids, Mesopotamian ziggurats, Buddhist stupas, Khmer temple-towers, and Maya terraced pyramids.

The Ancient Astronomers by Anthony F. Aveni explains the astronomical significance of such features as the Maya calendar, Polynesian navigation, Nasca lines in Peru, and Stonehenge.

Ancient Pueblo Peoples by Linda S. Cordell demonstrates the links between the early Pueblo cultures--Mesa Verde to Pueblo Bonito in Chaco Canyon to the Mimbres Region---with the Pueblo peoples of today.

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A NEW BOOK ON TEACHING ANTHROPOLOGY

The Teaching of Anthropology: Problems, Issues, and Decisions. Conrad P. Kottak, Jane J. White, Richard H. Furlow, and Patricia C. Rice, eds. Published by Mayfield Publishing Company in association with the American Anthropological Association. Mountain View, CA. 1997.

"This volume brings together the knowledge and insights of a group of scholars and teachers who share certain beliefs: that anthropology is valuable, that it has commitments, that teaching is a central part of our field, that anthropology has something to say to the public, and that we should be saying it to a wider audience."

--Conrad P. Kottak, Introduction, p. 1

AnthroNotes editors are pleased to recommend this new volume, a compendium of articles written by 40 leading anthropologists who are also teachers, which grew out of symposia on teaching held at the American Anthropological Association from 1990 -- 1992. Based on three sessions organized by the American Anthropological Association's Task Force on Teaching ("Central Themes in the Teaching of Anthropology," "The Incorporation of New Theory and Practice in the Teaching of Anthropology," and "How Exemplary Teachers Overcome Problems in the Teaching of Anthropology"), the twenty-five or so participants in the symposia provided the core for the articles in the book; the editors solicited an additional fifteen contributions.

The result is the first comprehensive volume on teaching anthropology since the publication of the landmark volume, *The Teaching of Anthropology*, edited by David Mandelbaum, Gerald Lasker, and Ethel Albert (1963), published by the University of California Press. The 1997 collection of short, insightful papers demonstrates the relevance and importance of anthropology in today's world, and the critical role that teaching plays in the transmission of the discipline.

The 1963 and 1997 volumes focus on teaching, but the recent volume extends the focus beyond the college classroom, arguing for the need to reach beyond academia, museums, and agencies to high schools, grade schools, and the wider community, to reach as large a public as possible. Although the statement "the main sphere for the transmission of anthropological culture is in the college classroom" (Mandelbaum 1963:2) is as true as it was 33 years

ago, anthropology today is a part of the precollege curriculum, incorporated into such courses as geography, world cultures, history, and biology.

Several contributors contrast the situation they face with that of the 1960s, pointing to the greater diversity of today's students, the implications of modern technology, and the very different employment outlook for graduate students in the 1990s. The 1963 volume reflected real concern that the supply of graduate students would not keep pace with the growing demand for anthropology courses in the nation's colleges. Contrast that to today's situation where advertisements for positions routinely generate hundreds of applications, and over thirty percent of Ph.D. anthropologists work in applied settings.

A fairly traditional subfield structure in part provides the organization for the book with sections on cultural, linguistic, paleo (physical and archaeology) and applied anthropology. Part I: Teaching the Introductory Course includes seven contributors, most of them authors of widely used introductory textbooks and readers: Conrad Kottak ("Teaching the Central Themes of Anthropology"); Marvin Harris ("Anthropology Needs Holism: Holism Needs Anthropology"); Melvin and Carol Ember ("Science in Anthropology"); William Haviland ("Cleansing Young Minds or What Should We Be Doing in Introductory Anthropology"); Larry Breitborde ("Anthropology's Challenge: Disquieting Ideas for Diverse Students"); Robert Borofsky ("Empowering Students at the Introductory Level"); Aaron Podolsfsky ("Teaching and Learning Anthropology in the 21st

Century"); and David McCurdy ("The Ethnographic Approach to Teaching Cultural Anthropology").

Parts II to VI follow: Teaching About Cultural Diversity; Teaching Linguistic Anthropology; Teaching Paleoanthropology; Teaching Applied Anthropology; and Teaching Anthropology to Precollegiate Teachers and Students.

Since 1963 the discipline has changed but so too have the students. To accomodate that major shift, there are two sections in the book that were scarcely envisioned in 1963: teaching cultural diversity (including articles on confronting multi-culturalism and putting it to good use in the classroom) and K-12 anthropology. Promoting the teaching of anthropology to pre-collegiate students is one of the AAA's current interests, as expressed by AAA President, Yolanda Moses (who has written a chapter in the new book). Articles in the K-12 section focus on what anthropology has to offer to teachers and students as well as writing anthropology books for young readers, curricular issues in the teaching of precollege anthropology, and various specific approaches for the classroom.

Together the book's papers demonstrate the relevance of anthropology to today's students and the profound changes that have taken place since the 1963 Mandelbaum volume was published. Contemporary students, as Kottak points out in his introduction, have grown up in a high-tech, mass-media world. These students are more diverse in age and ethnic background, and in many instances have experienced intense cultural diversity in their everyday lives---all the more reason for anthropology's relevance to them. As Kottak concludes in his illuminating and well-written introduction to the book:

Anthropology has a crucial role to play in promoting a more humanistic vision of social change, one that respects the value of cultural diversity. As we continue the transmission of anthropological culture, it can be as exciting today as it was for our intellectual ancestors and their students to discover in our field a better way of understanding self through the study of others....Compared with prior

generations, the young men and women of today are far more likely to travel beyond their own society and to encounter representatives of other cultures abroad or "at home." Anthropology's continuing legacy remains the exploration, understanding, and appreciation of human diversity.

The editors and publisher of *The Teaching of Anthropology* clearly hope the book will serve the purpose to which it is dedicated--to create better teachers of anthropology for new generations. The editors believe it is time to think seriously about anthropology's problems and uses as well as the decisions about what to teach, whom to teach, and, perhaps most importantly, how to teach. The book's proceeds will go toward endowing an AAA/Mayfield Outstanding Teaching Award.

* To order *Teaching Anthropology*, a book that will assist anyone interested in learning about anthropology and about teaching anthropology in today's world, send \$38 to: Marketing Product Manager, Mayfield Publishing Company, 1280 Villa Street, Mountain View, CA 94041-1176; or call 1-800-433-1279.



WANTED: CULTURE--DEAD OR ALIVE? The Smithsonian's Festival on the Mall

by Richard Kurin

If you visit Washington, D.C. around July 4th, you can't miss the Festival of American Folklife. Held in cooperation with the National Park Service, spread out in a sea of large white tents across the National Mall, the Festival is an annual living exhibition of cultural heritage from around the United States and the world.

Visitors going in and out of the Smithsonian's museums can enjoy the exhibits dealing with natural history, anthropology, American history, air and space history, and art, but the festival's nearby tents offer a different kind of exhibition--craftspeople making and displaying their wares; native peoples preparing indigenous foods to buy and enjoy; and cultural specialists presenting their traditions alongside folklife specialists offering further commentary.

Each festival program is akin to a museum exhibition, with its own boundaries and space (about two football fields), labels and signs, stages and performances, and food and craft sales. A program usually consists of about 100 musicians, craftspeople, cooks, and story tellers and about 10 lay and academic presenters who provide background information, introductions, translations, and answers to visitors' questions.

In past years the Festival has featured particular nations such as India, Japan, Indonesia, Mexico; regions, such as the Caribbean or the Andes; American ethnic cultures such as Lao Americans, Russian Americans, or various American Indian tribal groups; occupational programs such as cowboys, taxi drivers, Senators (as in baseball players) and senators (as in members of congress), trial lawyers, even scientists at the Smithsonian.

If you came to the festival during the summer of 1996, you would have visited with folks from *The American South*, *Iowa*, and *The Smithsonian Institution*; if you come the summer of 1997, you will find programs on the *Mississippi Delta*, *African*

Immigrants to the U.S., and *Sacred Sounds from Around the World*.

The festival attempts to create a physical context for the traditions represented. In the past, the Festival has included, among other things, a race course from Kentucky, an oil rig from Oklahoma, a New Mexican adobe plaza, a Japanese rice paddy, a Senegalese home compound, and an Indian festival village. Animals, from working horses to llamas, from steers to sheared sheep, have been part of Festival presentations. A buffalo calf was even born on the Mall one Festival morning, and an escaped steer finally was roped to the ground in the Kennedy Center parking lot after a chase down Constitution Avenue.

Since its inception, the Festival of American Folklife has featured more than sixteen thousand musicians, artists, performers, craftspeople, workers, cooks, story tellers, ritual specialists, and other exemplars from numerous ethnic, tribal, regional, and occupational cultures. The Festival has had strong impacts on policies, scholarship and folks "back home." Many U.S. states and several nations have remounted a Festival program and used it to generate laws, institutions, educational programs,



documentary films, recordings, museum and traveling exhibits, monographs, and cultural activities. In many cases, the Festival has energized local and regional tradition bearers and their communities, and thus helped conserve and create cultural resources.

The Festival as a Museum Display

The Folklife Festival is one way in which the Smithsonian has attempted to turn museology outward, to connect with the public and its constituencies, and to include the voices of the represented. The strongest feature of the Festival is its attempt to foreground the voices of tradition bearers as they demonstrate, discuss and present their cultures. For the Smithsonian, the Festival constitutes the people's museum, wherein the celebrated national treasures are the people themselves, and their traditional wisdom, knowledge, skills, and artistry.

The Festival encourages visitors to participate--to learn to sing, dance, eat the foods and speak to the folks represented in the Festival program. The Festival, while celebrating American and worldwide diversity, encourages the bridging of differences in a larger celebration of freedom and human creativity.

Beloved by visitors and the general public, well-received by the press and politicians, heartily endorsed by tradition-bearers, the Festival of American Folklife nonetheless has its problems. In combining and crossing such categories as education and entertainment, scholarship and service, the authentic and the artificial, and celebration and examination, the festival is an unfamiliar genre and can be misconstrued.

Despite the fact that more than one thousand cultural scholars have participated in the Festival's research and presentation, a few find the Festival a throwback to the 19th century's world's fairs and other discredited forms of cultural display and voyeurism. And while the Festival receives kudos for placing ordinary people's culture on the National Mall, others have expressed resentment at the festival's placement on the Mall, its implied denigration of traditional museum functions, and its alleged effect on the natural landscape.

Living Culture on the Nation's Front Lawn

The Festival tells the story of the diverse peoples who populate the nation, but whose cultural achievements are not well represented in the Smithsonian's exhibitions or collections. As method,





the Festival pioneered the research-based use of living performances and demonstrations. This was consistent with a larger trend in the museum world at the time--the use of "living history" as a presentational or interpretive technique. Whereas living history performances were acted, the Festival emphasized authenticity--the presence and participation of the living people who were active and exemplary practitioners of the represented communities and traditions.

In Search of a Genre

Why call this phenomenon a festival? In the Washingtonian scheme of things, the Festival of American Folklife does operate like a festival. It creates its own space on the Mall, a sometimes jarring presence in the midst of official, neat space. It creates a face-to-face community in the shadows of inanimate official buildings and the institutions of state. The Festival is messy, its boundaries of participation, time and event unclear. The Festival creates an experience and event that are intense, but short-lived, in which representations are magnified, pushed together, and then, just as quickly, dispersed. And it brings people together---tradition-bearers, the public, scholars, officials, administrators, builders, designers, volunteers, and

others who would not normally interact. As Margaret Mead once wrote, the Festival is "a people-to-people celebration in which all of us are participants---now as organizers, now as celebrators, now as audience, as hosts and as guests, as friends and neighbors or as strangers finding that we can speak the same language of mutual enjoyment" (*Redbook*, July 1975).

The Festival has always navigated between the various axes of art (as entertainment), cultural rights (as advocacy), education (as public service), and knowledge (as scholarship and experience). It has from the beginning sought to broaden knowledge, deepen appreciation, and increase support for art forms and practitioners overlooked in a society whose sense of beauty and value is generally driven by the exercise of power and the influence of the marketplace. At times during its history, and even within the same year among its programs, presentations and framing have gravitated toward one or another axis. But by and large, the Festival's form, contexts, purposes, and place have remained the same.

Cultural Representation

While the Festival, in some literal way, may recall 19th century forms of cultural exhibitionism, it has benefited from decades of cultural research and discussions about representation to evolve into something quite different. Shifts in authoritative voice, collaboration in self-representation, treatment of contemporary contexts, as well as the forms of discourse, have significantly changed, thanks in large part to the efforts of people like Ralph Rinzler, Bess Lomax Hawes, Bernice Reagon, and a generation of cultural workers who have labored at the intersection of scholarship, cultural community advocacy, and public education. Large-scale cultural displays are situated in a public world in which various parties have a stake. Politicians, advocacy groups, rebels, and scholars may use these forms to forward their own agendas, and have become very sophisticated in doing so, as readily apparent in various case studies of Festival programs.

As a representational genre, living cultural exhibitions like the Festival share features with the zoo, the local fair, a town meeting, an object-based museum exhibit, an ethnographic monograph, a talk show, and a documentary film. The Festival differs from a book, film, exhibit and concert in that it lacks linearity.

While the Festival has some highlighted special events, a daily schedule and structured forms of presentation, many events happen simultaneously. Not everyone experiences the same thing. The Festival offers the opportunity, indeed the desirability, for people---visitors, staff, participants ---to chart their own experiential routes through it. The density of the crowd, the symbolic weight of the location and the significance of the July Fourth holiday help make this experience memorable. Most distinctively, the Festival offers the immediacy and sentient presence of people possessed of knowledge, skill and wisdom, who can and do speak for themselves. At the Festival, many different people speak in a variety of voices and styles. For the most part, the authority to speak and the content of that speech is diffuse and shared among participant, scholar/curator, and visitor.

Despite the challenges to and questions about it, the Festival of American Folklife continues to represent our American and human cultural heritage, presenting it to a large audience in an educational way, connecting it to real people and communities in ways that enhance the national civic culture of our democratic society. In addition, the Festival on the Mall continues to provide a model for localities, states, and other nations to present grassroots cultural expressions to their own citizenry.

It is no surprise that many other events have drawn inspiration and lessons from the Smithsonian's Folklife Festival--from the Black Family Reunion to the L.A. Festival, from a Festival of Hawaiian Culture to an Indigenous Culture and Development Festival in Ecuador, from the America's Reunion on the Mall Festival for the Presidential Inaugural to Southern Crossroads, a Festival of the American South for Atlanta's Olympic Games. Indeed, even the venerable old Smithsonian drew upon the Festival as genre for the production of its own 150th

anniversary celebration in a mile-long Birthday Party held for some 600,000 people on the National Mall on August 10-11, 1996. Some of the Smithsonian ancestors might have been quite surprised, but I think ultimately heartened, to learn that the Festival genre, historically used to represent others, had become a successful means of representing ourselves.

For Further Reading

Kurin, Richard, *Brokering Culture*. Washington: Smithsonian Institution Press, 1997. (An expanded version of this article constitutes the chapter titled "The Festival on the Mall.")

Festival of American Folklife Program Book. Washington: Smithsonian Institution. Essays in the annual Program Book discuss complexities and dimensions of the Folklife Festival. See especially essays by Richard Kurin from 1990-1996.

Richard Kurin is Director of the Smithsonian's Center for Folklife and Cultural Programs



ATTENTION TEACHERS!

The SI Center for Folklife has a large selection of multimedia educational kits, videos, and recordings on U.S. and world cultures, many based on the Festival. For a full listing, write or call Smithsonian Folkways Mail Order, 414 Hungerford Dr., Suite 444, Rockville, MD 20850; (301) 443-2314; Fax: (301) 443-1819; email: www.si.edu/folkways.

An earlier *AnthroNotes* 7:1 (winter 1985) article, "Studying Community Festivals," by Audrey Shalinsky, includes student activities and is available by writing to: Anthropology Outreach Office, NHB MRC 112, Smithsonian Institution, Washington, DC 20560.

NEW VOLUME ON AMERICAN INDIAN LANGUAGES

"By the end of the next century, 75% of all the world's languages will be extinct!" stated Ives Goddard, volume editor of the recently published *Languages*, Volume 17 of the *Handbook of North American Indians* (Gen. Ed. William Sturtevant). Many of these languages that will become extinct include those indigenous to North America.

Languages is partly a culmination of the work of Smithsonian scientists and collaborators from the founding of the Institution's Bureau of Ethnology in 1879 to the present day. The volume documents the extraordinary diversity of North American languages at the time of European contact. The folded color map that accompanies the volume highlights sixty-two language families, mapped in their locations at the approximate time of first European contact, when several hundred different languages were spoken.

Today, 209 languages are spoken, but only 46 are spoken by a significant number of children, most of them in Canada and northern Mexico. Several white spaces on the map indicate areas for which there is no surviving linguistic data on which to base classification, and 120 of the languages noted on the map are already extinct. Goddard said "this is a tremendous loss as there is still so much we don't know from a scientific point of view."

The volume and linguistic map make it clear that native languages of North America do not belong to a single family or conform to a single uniform type. The book further breaks down these language families into subgroups. For example, within the Algonquian language family are the Wiyot and Yurok languages and the Algonquian family, which has many subgroups, such as Arapahoan and Cheyenne. These subgroups, in some cases, are further broken down into discrete languages.

This important reference on Native languages of North America is unlike any other. Not only will scientific linguists find it a useful tool, but so will Native peoples, educators, and others interested in learning about Indian languages. The book

discusses the history of the Native languages of North America; general characteristics; Native writing systems, some of which go back as early as the 17th century; forms and styles of speech within a community; place and personal names; the borrowing from languages; nonspeech communication systems; classification; and sources of additional information for each language---grammar, dictionary, and texts.

More than half of the book is devoted to twelve grammatical sketches, all containing vocabularies, of Native languages representing different language groups: Central Alaskan Yupik, Hupa, Cree, Lakota, Zuni, Eastern Pomo, Seneca, Wichita, Thompson, Coahuilteco, Sahaptin, and Shoshone. The volume is illustrated with photographs and tables and includes an extensive bibliography and index.

The other volumes of the encyclopedic *Handbook of North American Indians* summarize knowledge about all Native peoples north of Mesoamerica, including human biology, prehistory, ethnology, linguistics, and history. In addition to Volume 17: *Languages*, the following volumes are available: Volume 15: *Northeast*; Volume 8: *California*; Volume 9: *Southwest* (Puebloan peoples and Southwest prehistory and history); Volume 6: *Subarctic*; Volume 10: *Southwest* (non-Puebloan peoples); Volume 5: *Arctic*; Volume 11: *Great Basin*; Volume 4: *History of Indian-White Relations*; and Volume 7: *Northwest Coast*. Forthcoming volumes are *Plateau* and *Plains*.

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AnthroNotes has a three part mission:

- 1) to more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
- 2) to help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of curriculum subjects; and
- 3) to create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

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IDENTITY TRANSFORMATION IN COLONIAL NORTHERN MEXICO

William L. Merrill

... con gran facilidad mudarán a semejanza de los mulatos y mestizos su traje, dejando crecer el cabello, trocando la tilma por un capote; pues con esta transformación se llaman gente de razon, y se eximen de pagar tributo.

A Jesuit Priest, 1754

In 1754, Spanish officials and Catholic missionaries in the province of Sinaloa, located in northwestern Mexico, debated the wisdom of requiring local Indians to pay tribute to the King of Spain while exempting certain non-Indian settlers from such payments. A Jesuit missionary, whose opinion but not his name is preserved in the historical record, argued against the measure, indicating that the Indians would simply change their identity: "... with great ease they will come to resemble mulattos and mestizos in their dress, letting their hair grow and exchanging their capes for cloaks, and with this transformation they call themselves people of reason and are exempted from paying tribute."

Historical Background

During the century following the Spanish conquest of the Aztec capital of Tenochtitlan in 1521, Spanish settlers spread from central Mexico as far north as what is now the southwestern United States. Drawn especially by major strikes of silver and gold in the modern state of Chihuahua, miners were joined by missionaries, ranchers, farmers, and merchants in an effort to establish firm Spanish control over the northern frontier.

At the time of European contact, Chihuahua was populated by a number of distinct Indian groups speaking a variety of mutually unintelligible languages. Nomadic, hunting-gathering bands lived in eastern and northern Chihuahua, while in central and western Chihuahua, sedentary societies supplemented their agriculture with extensive collecting of wild resources. All these societies were egalitarian and locally autonomous.

At the time of contact, there were no Native conquest states in this region (such as the Aztec and Inca farther south) and, while local groups probably formed alliances during times of conflict, no political organization existed that encompassed more than a few small bands or contiguous rancherías.

Franciscan and Jesuit missionaries first contacted the Indians of Chihuahua in the second half of the 16th century, but they did not begin to create a network of permanent missions until the early decades of the 17th century. Indian revolts throughout the second half of the 17th century disrupted their efforts, but by the early 18th century this mission system covered most of central and western Chihuahua. In 1767, King Charles III of

Spain expelled the Jesuits from all of his New World empire, and Franciscan missionaries and diocesan priests divided the responsibility for their missions in northern Mexico.

Concept of Identity

The expansion of the Spanish colonial system and particularly the Catholic mission system in the region brought about important changes in local Indian identity. Identity is one of the few concepts to have made the transition from the social sciences to popular culture with its technical definitions largely intact. Academic and popular views of the concept of identity agree that identity is, in essence, who I think I am and who others think I am or, on a more sociological level, who we think we are and who others think we are. These views also concur that identity is the product of the interplay between these insider and outsider perspectives, and that it is subject to change as the circumstances change within which an individual or group operates.

Although the concept of identity is relatively uncomplicated--we might even say self-evident--this fact does not diminish its importance as a central feature of human existence. Moreover, while we may have a clear idea of what identity is, we still have much to learn about how identities are created, maintained, and transformed.

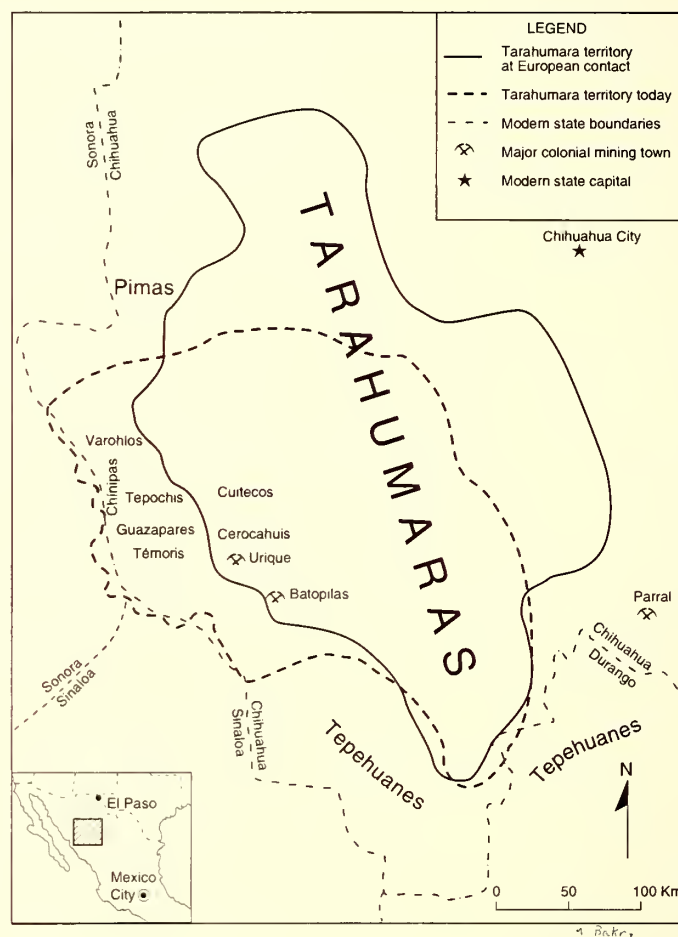
Colonial contexts offer an excellent opportunity for examining these processes. The expansion of colonialism usually involves the formation of new

kinds of social, economic, and political relations among the members of societies and between societies that have had limited previous contact with one another. In such settings, existing schemes of identity classification must be revised and the significance and implications of these classifications defined. Seldom do the colonized passively accept the classifications that their colonizers intend to impose on them, for important political and economic as well as psychological interests are at stake.

More frequently, identities and the relations of inequality typically assigned to them are openly contested.

Here I will explore processes of identity formation, maintenance, and transformation during the colonial and immediate post-colonial periods in the Tarahumara region of central and western Chihuahua. At the time of European contact, the Tarahumara, who today call themselves "Ralámuli," farmed, hunted, and gathered in a territory that covered about fifty thousand square kilometers in central and western

Chihuahua (see map). During the past four hundred years, they have been displaced from much of their original territory and are found today in the foothills, mountains, and canyons of western Chihuahua. They speak a language that is related to those spoken by their neighbors in northern Mexico--the Guarijío, Tepehuan, Pima, Yaqui, and Mayo--as well as more distant Indian societies like the Comanche, Hopi, and Aztec, all of which belong to the Uto-Aztecan language family.



Ethnic Classifications

When the Spanish arrived in northern Mexico, they brought with them a scheme of ethnic classification derived ultimately from Iberian and European concepts of ethnicity and modified during the previous century on the basis of their experience in other parts of the New World. The basic distinction in this scheme was that between "Spaniards" and "Indians." The category of "Spaniard," itself a subcategory of "European," was divided into two principal subcategories, the first labeling Spaniards born in Spain (*peninsulares*) and the second Spaniards born in the New World (*criollos*). The category of "Indians" also was subdivided; distinct Indian groups were labeled by tribal identities, which were crosscut by several general categories. For example, Indians were classified as being "civilized" or "barbaric"--a distinction that reflected the prejudices not only of Europeans but of central

Mexican Indians as well--depending primarily on the complexity of their societies. Those Indians who converted to Christianity were called "Christians" (*cristianos*), "baptized people" (*bautizados*), or "converts" (*conversos*), and were distinguished from those who did not, who usually were referred to as "*gentiles*."

Christian Indians were further distinguished according to their inclination to accept the conditions of colonial existence that their colonizers attempted to impose upon them. There were "good Christians," who tended to accept these conditions, and "bad Christians," who did not. Those "bad Christians" who abandoned their mission pueblos and the Spanish economic centers to live in areas beyond Spanish control were characterized additionally as "apostates," "fugitives," or "cimarrones." The term "cimarrones" originally meant "runaways" and is the source of the name



"Seminoles," which labeled Indians and African slaves who sought refuge from European colonialism in remote areas of Florida.

Apostate and fugitive Indians often moved into established communities of gentile Indians. In fact, people in Chihuahua today use the terms "gentiles" and "cimarrones" inter-changeably to designate the descendants of those Indians who remained outside the colonial system. However, not all gentiles rejected baptism and incorporation into the mission pueblos. Many remained outside the mission system simply because the opportunity to join had not presented itself or because they did not want to abandon their rancherías, which frequently were located long distances from the mission pueblos. As the mission system expanded into their areas, they often accepted baptism. Thus, over the course of the colonial period, the number of Indians identified as "gentiles" tended to decrease and to include primarily those Indians who intentionally rejected an affiliation with the Catholic mission system.

Joining the categories of "Spaniards" and "Indians" in the Spanish ethnic classification was a third division composed of a complicated set of categories that labeled individuals of mixed European, Indian, and African genetic heritage. These categories, theoretically infinite in number, were collapsed under the general term of "castes" (*castas*). The people so classified also were categorized collectively as "*gente de razón*," a term that literally means "people of reason," but was originally used to designate non-Spaniards and especially people of mixed genetic heritage who were able to speak the Spanish language. Today non-Indians in Chihuahua sometimes refer to all local non-Indians as "*gente de razón*" regardless of their genetic heritage. However, colonial documents reveal that many Spaniards carefully distinguished themselves from the ethnically mixed "*gente de razón*," whom they tended to consider of inferior status.

The Indians of Chihuahua undoubtedly maintained their own schemes of ethnic classification, but it is impossible to determine with any confidence what these schemes might have been because all of our information is filtered through documents produced

by Europeans. From the evidence that is available, it appears that the Indians emphasized language as the principal marker of ethnicity, further distinguishing among speakers of the same language on the basis of locality. There was some blurring of identity along the borders of different language groups, where speakers of distinct languages intermarried, lived in the same or adjacent rancherías, and occasionally shared political leaders. Yet, even in such border areas where bilingualism was the rule, a person's first or preferred language appears to have been the key element in determining his or her ethnic identity.

The Spanish and Indian schemes of ethnic classification probably differed primarily in the degree to which the categories they included were ranked. In the Spanish scheme, Spaniards and other Europeans were located at the top, "*castas*" in the middle, and Indians at the bottom. In specific areas, however, Indians and in particular "good Christian Indians" were considered by Europeans to be morally if not socially superior to certain people of mixed heritage whose libertine ways were felt to jeopardize the progress of "civilization" on the frontier.

Given the egalitarianism of the Indian societies in northern Mexico, it is unlikely that their schemes of ethnic classification were as hierarchical as that of the Spaniards, although they may have thought of themselves as superior to the Spaniards. Today the Tarahumara Indians classify all non-Indians as "whiskered ones" (*chabochi*) and say that they are the children of the Devil, while considering themselves and all other Indians to be equals and the children of God.

Fewer Indian Identities

One of the most notable features of the history of identity formation in colonial northern Mexico is the decline in the number of distinct Indian groups noted in the documentary record between the 17th and 18th centuries. In some cases, especially among nomadic Indian societies in eastern Chihuahua, entire groups disappeared because the majority of their members died in epidemics or conflicts with the Spanish, the survivors joining other Indian

groups or assimilating into the emerging mestizo population. Epidemics and military conflicts also had an important impact on the more sedentary Indian populations in central and western Chihuahua. In these areas, however, the reduction in the number of distinct Indian identities appears to have been due primarily to the emergence of more inclusive categories of ethnicity and a better understanding of the linguistic and cultural relationships among the Indians on the part of missionaries and colonial officials.

At the time of European contact, the greatest ethnic diversity in the region was reported from the mountains and rugged canyon country of western Chihuahua. The first missionaries to visit and work in this area identified these Indians as comprising a number of distinct "nations" (*naciones*): Chinipas, Varohíos, Guazapares, Témoris, Tepochis, Cuítecós, Cerocahuis, and so on. However, the missionaries' perspectives on local ethnic diversity was strongly affected by their previous experience in the Sinaloan missions to the south, where the Indians belonged to a number of politically autonomous groups and spoke many distinct languages. When they arrived in western Chihuahua, these missionaries failed to realize that the various politically autonomous groups that they encountered probably were sub-divisions of but two ethnic groups: the Varohío (known today as Guarijío) and the Guazapar, who probably spoke a dialect of Tarahumara rather than a distinct language.

In 1632, the Varohíos and Guazapares expelled the missionaries and other outsiders from their territories. It was not until the late 17th century that the Spanish had an opportunity to acquire a more profound understanding of the cultural and linguistic affiliations of these groups. From that point on, the missionaries began using fewer terms to distinguish among the Indians in the region.

It is also likely that the influx of Tarahumaras and Indians from other areas into western Chihuahua resulted in some cultural and linguistic homogenization across the region. Large numbers of Tarahumaras began migrating into this area during the major revolts in the mid- and late 17th

century, and the immigrants probably included both rebels fleeing from the Spanish military and other Tarahumaras who sought to avoid the violence altogether.

Where the number of Tarahumara immigrants was small, they were absorbed by the local communities, eventually substituting local Indian identities for their own. A similar loss of identity may also have occurred where the number of Tarahumara immigrants was more substantial, but the outcome for ethnic identity was not always the same. The large numbers of Tarahumara immigrants who entered the Varohío area of western Chihuahua apparently were assimilated into the Varohío communities: the Varohíos continue to live today as a distinct ethnic group in roughly the same area as they did in the 17th century. In contrast, the Tarahumaras who migrated to the neighboring Guazapares region did not lose their identity but instead, by the 18th century, the Guazapares became known as Tarahumaras and apparently identified themselves as such.

Because comparable numbers of Tarahumaras migrated into the Guazapar and Varohío areas, how can we explain the fact that the Varohíos retained their distinct identity while the Guazapares lost theirs? I believe that the key lies in differences in the degree to which the languages spoken by the Varohíos and Guazapares were similar to the Tarahumara language spoken by immigrants into their communities. Although closely related to Tarahumara, Varohío is nonetheless a distinct language. The Guazapar language, on the other hand, probably was a mutually intelligible variant of Tarahumara. Assuming an identity as "Tarahumaras" thus would have been simpler for the Guazapares than for the Varohíos. Indeed, given the linguistic and cultural similarities between the Guazapares and the Tarahumaras, it is possible that the Guazapares identified themselves as Tarahumaras before the arrival of the Spanish, who might have concluded incorrectly that "Guazapares" labeled a separate ethnic group rather than a sub-division of the Tarahumaras.

In the 18th and 19th centuries the Spanish expanded the semantic scope of the term "Tarahumara" to

label both Tarahumaras and other Indians who closely resembled them. They did this even in the case of Indians who did not identify themselves as Tarahumaras. This reformulation of the category "Tarahumaras" by the Spanish may have paralleled and even contributed to the adoption of the term as a more encompassing ethnic label by the Indians in the region. During the colonial period, Indian groups from widely separated areas came into contact with one another in Spanish mines, haciendas, and other population centers. It is reasonable to assume that this increased interaction, combined with the growing presence of non-Indians with whom to contrast themselves, encouraged the emergence of a sense of common identity among the Indians, an identity that came to be labeled as "Tarahumara."

Today the Tarahumaras consider the term "Tarahumara" to be a Spanish word, and they refer to themselves as "Ralámuli." The term "Ralámuli" has meanings on four increasingly specific levels of significance. At the most general level, it designates "human beings" in contrast to "non-humans." At the second level, it labels "Indians" in contrast to "non-Indians." At the third level, it refers only to Ralámuli Indians in contrast to the members of other Indian groups. Finally, at the most specific level, it designates Ralámuli men in contrast to Ralámuli women. A recognition of these different senses clearly indicates that the term "Ralámuli," semantically one of the most complex words in the Ralámuli language today, was adjusted, if not created, to accommodate the distinction between Indians and non-Indians that impinged itself upon the Ralámuli and other Indian people in the colonial period.

The word "Ralámuli" first appears in the historical literature in 1826 in a sermon prepared in the Tarahumara language by the Franciscan missionary Miguel Tellechea. Given its late appearance, I am inclined to conclude that the Tarahumaras adopted the term "Ralámuli" during the course of the colonial period to label the more inclusive ethnic identity that was being forged out of the multiple and often very localized identities of the pre-contact period. Because the term "Tarahumar" was used by the Spanish from the time of their arrival in

Chihuahua, the Tarahumaras later on in the colonial period might have identified it as a Spanish rather than Native word, as they do today. If so, they may have rejected it as inappropriate as a label with which to distinguish themselves from non-Indians.

The Spatialization of Identity

The Tarahumaras responded to the Spanish colonial system in a variety of ways, ranging from enthusiastic acceptance to near total rejection. Through time these differences in attitudes became increasingly associated with communities located in different areas rather than being replicated within each Tarahumara community.

By 1767, when the Jesuits were expelled, the Tarahumaras who rejected most aspects of the Spanish colonial system lived in the remoter reaches of western and southern Tarahumara country, far from major Spanish settlements and economic centers. There they were little affected by labor drafts, Spanish encroachment on their lands, and the programs of directed culture change administered by the Catholic missionaries.

These isolated communities of Tarahumaras contrast with those located in and around the missions and Spanish economic centers of east central Chihuahua and northern Durango. Here the Indians extensively participated in the regional colonial economy and were described by the missionaries and Spanish colonial officials as having accepted much of Spanish colonial society and culture. Between these two groups were the Tarahumaras who lived within the mission system but some distance from major Spanish economic centers. These Indians created a synthetic culture that combined both indigenous and introduced ideas and practices. They also retained their distinct Indian identity, which they modified to reflect their affiliation with the Catholic mission system.

Summary

In this essay, I have discussed three basic processes related to the formation and transformation of Indian identity in colonial northern Mexico. All three processes took place simultaneously and were

inextricably linked to more general processes of the colonial endeavor.

The first process involved modifications in the Indian schemes of ethnic classification. Unlike the Spanish, who employed essentially the same scheme in northern Mexico as the one they had developed earlier in central Mexico, the local Indians modified their pre-existing schemes rather extensively. They created new terms to label non-Indians as well as new or modified terms to label the emerging category of "Indian." They also adopted ethnic labels from the Spanish to designate subgroups of Indians who varied from one another in their responses to the colonial system.

The second process was the reduction in the number of terms used to label local groups. In other areas of the New World, the emergence of more inclusive ethnic categories often resulted from the consolidation of remnant groups into new ethnic units. In central and western Chihuahua, in contrast, most Indian groups were sufficiently large to sustain their biological reproduction and avoid reduction to the status of remnant societies, at least until the 20th century. The Spanish began using fewer terms to label these groups because they gradually came to recognize the cultural and linguistic affinities among them. In northern Mexico as in other areas of the New World, they sometimes carried this process too far, lumping together Indians who probably were sufficiently different to warrant designation as distinct groups. During the same period, the Indians in the region also apparently began employing broader ethnic labels to designate themselves, in part because the Spanish were using these terms in a more inclusive sense, in part because of the cultural and linguistic homogenization that resulted from population movements, but most importantly because they were forging a sense of common Indian identity to contrast with that of non-Indians.

The third process was the spatialization of identity, in which internal divisions within the more inclusive Indian identities became associated with distinct geographical areas. These divisions were defined in terms of the different stances that different Indian people and groups took with respect to the Spanish

colonial and mission enterprise and, on a superficial level at least, the Spanish and Indians agreed on what the distinctions were.

The interplay of both external and internal factors is evident in all three of these interconnected processes. Colonial categories and policies forced people to be "Indians" as well as specific kinds of "Indians," but at the same time they motivated Indian people to create a common identity as "Indians" that at different times and places served as the basis for political solidarity against the Spanish. Yet, while the Spanish presence engendered solidarity at one level it produced internal divisions and conflicts at another. At no time during the colonial period did all the Tarahumaras unite to support or oppose the Spanish.

The Spanish presence also stimulated the movement of Indians out of their home communities, either to avoid contact with the Spanish or to trade with and work for them. People from many different ethnic groups, often including both Indians and non-Indians, came together in refuge areas, in missions near Spanish settlements, and in Spanish economic centers, where identities were both reinforced and revised. One result was the transformation of large numbers of Indians into mestizos, either because of their assimilation into the emerging mestizo society or because of the creation of offspring of mixed ethnic and genetic heritage through inter-ethnic marriage or sexual relations.

Although less frequent, the transformation of non-Indians into Indians also occurred. Non-Indian criminals and other fugitives from Spanish society sometimes joined communities of fugitive and gentile Indians, many of whom themselves came from distinct Indian societies. The emergence of a common identity within these communities depended upon overcoming the ethnic diversity of their members, a process no doubt facilitated by the physical isolation of the communities and their marginal and often oppositional stance with respect to the Spanish.

Despite the transformations that have taken place in their lives since European contact, many Indian societies in northern Mexico have succeeded in

maintaining their distinctive identities. During the past century, several developments in Mexico—including the *indigenista* movement, the organization of Indian communities into collective landholding and economic units called *ejidos*, and changes to the Mexican Constitution, which now acknowledges that Mexico is a multi-ethnic and multi-cultural society—have promoted the persistence of separate Indian identities. However, Indian people have never depended on external structures and forces for the maintenance of their identities. Instead they have produced and reproduced their identities as part of their pursuit of the goals and interests that they have defined as fundamental to their survival.

For Further Reading

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ANTHROPOLOGIST REDISCOVERS PORTRAIT PHOTOGRAPHER BENEDICTE WRENSTED

by John Barrat

Call her the Annie Leibovitz of Pocatello, Idaho—an extraordinary woman portrait photographer. In 1894, Benedicte Wrensted settled in this dusty frontier town and made a successful living as a portrait photographer. When she retired some 20 years later, Wrensted left behind a collection of beautiful portraits of both Native and Anglo Americans.

Yet, critical recognition escaped Wrensted in an age before mass-media and the glossy magazine. Her subjects were local people — cowboys, school groups, soldiers, ranchers, firemen, families and newly married couples from Pocatello and nearby Fort Hall Indian Reservation. Rarely were her photographs published. Most were taken home by the customer who paid to have them done and placed on a wall or mantelpiece. When Wrensted sold her photography studio in 1912, she sold all her glass negatives as well. She then moved to California and died, in obscurity, in Los Angeles at the age of 89.

Today, an exhibition of her portraits, "Benedicte Wrensted: An Idaho Photographer in Focus," has been traveling from Nebraska, Missouri, Washington, Indiana, and Kansas to the Danish Immigrant Museum in Elkhorn, Iowa (5/15/97-6/20/97) and will be on exhibit most likely in Denmark in 1998. A number of her photographs have recently been donated to the Smithsonian's National Anthropological Archives from private collections, and there is a growing appreciation of her work among Native Americans, anthropologists and the general public.

Wrensted's recent rise from obscurity—she was unknown a decade ago—is the result of detective work and research by anthropologist Joanna Cohan Scherer of the Smithsonian's National Museum of Natural History in Washington, D.C.

In 1984, Scherer was researching photographs of Great Basin Indians for the Smithsonian's *Handbook of North American Indians*, when she

discovered a collection of glass negatives in the National Archives in Washington, D.C. The negatives were tagged "Portraits of Indians From Southeastern Idaho Reservations, 1897." None of the photos were identified by individual nor attributed to a photographer.

The most beautiful photographs in the world are of little use to scholars if they aren't identified," says Scherer, who has spent years researching and collecting photographs for the Handbook. Still, "the images were so compelling, I had several prints made for possible use later."

That same year, Scherer happened upon some of the same images in the one-room Museum of the Bannock County Historical Society in Pocatello, Idaho. "Tacked up on a wall 20 feet above eye level were five photographs; two I had seen at the National Archives," Scherer recalls. "Closer inspection revealed that the photos were on mounts identifying them as the work of Benedicte Wrensted—a photographer I'd never heard of. The museum curator knew nothing of her either."

Inquiring around Pocatello, Scherer located a few tribal elders who recalled Wrensted's studio. One source told Scherer of a niece of Wrensted's who lived in California. Inspired by these leads, Scherer became determined to learn as much as she could about this little-known woman.

Over the next decade, she read issues of the *Pocatello Tribune*, from its beginning in 1893 to 1912, digging out articles and advertisements that mentioned Wrensted. She contacted Wrensted's niece in California and advertised in local Pocatello newspapers, soliciting information about Wrensted and requesting people with Wrensted portraits to contact her.

After Scherer learned that Wrensted had emigrated to the United States from Denmark at age 36, Scherer applied for and received a grant from the Smithsonian's Suzanne Liebers Erickson Danish Exchange Program to go to Denmark for four weeks. There, searching public records, she unearthed more information about Wrensted's early life and family.



Benedicte Wrensted was born in 1859 in Denmark, attended public schools and learned photography from her aunt, Charlotte Borgen, a self-taught photographer. For a time, Wrensted operated a photography studio in the town of Horsens and was a member of the Danish Photographic Association. "In 1892, her work was publicly recognized by Danish court photographer Mary Steen, which was quite an honor," Scherer says. Few of Wrensted's photographs from this period have surfaced. Wrensted and her mother emigrated in the summer of 1894 to Pocatello to join Peter Wrensted, Benedicte's brother, a carpenter who had moved to Pocatello a few years earlier. Wrensted opened her first Pocatello studio in 1895 and became a leading member of the Danish community there. In 1897, Wrensted placed this advertisement—one of many—in the *Pocatello Tribune*:

Photographs: I am Prepared to compete with all Comers in Workmanship. Artistic Finish and at Reasonable Prices. All work Guaranteed. I am Here to Please and my customer's Satisfaction is my aim. A'm here to Stay, not for a few days, but to Remain with you. Patronize those who Patronize you. Miss B. Wrensted.

In 1994, Scherer wrote in *Visual Anthropology* 6(4): "Although millinery and dressmaking shops were owned by a succession of women proprietors,

Wrensted's status as an unmarried woman in the Pocatello business community, however, seems to have been unique. In the photographic trade, it was not uncommon for single women to become commercial photographers. Photographic techniques and skills were mainly self-taught or taught under brief tutelage with another photographer. Women could carry out their photography careers within the confines of the studio, which was often in their home. This created an aura of domesticity, which gave an edge of respectability to the profession."

As an anthropologist who has been studying historical Native American photographs for more than 25 years, Scherer was also determined to identify as many of the people in Wrensted's photographs—both Indian and Anglo—as possible. In the mid-1980s, she began consulting with Bonnie Wadsworth, the director of the Sho-Ban Tribal Museum. Over the next five years, Wadsworth interviewed Indian elders who provided many identifications.

In 1991, Scherer made copies of each of Wrensted's Indian portraits and took them to Edward Edmo Sr., a Shoshone storyteller from the Fort Hall Indian Reservation. "Edmo was able to identify the families of most of the people in the photographs," Scherer says. "I then took photos to the families on the reservation, who gave me the names of individuals or who verified previous identifications.

Scherer also tracked down the names of many of the Pocatello citizens in Wrensted's photographs. She searched the photo holdings of libraries, museums, historical centers and private individuals for additional Wrensted photographs.

During her search, she discovered a large selection of Wrensted prints owned by the Robert Leonard family of Silver Spring, Md. Leonard had grown up in Pocatello, and his family had a long history there. With Scherer's persuasion, his collection, along with a number of smaller collections of portraits by Wrensted, were donated to the Natural History Museum's National Anthropological Archives.

What sets these portraits apart is Wrensted's skill in capturing the individuality of the people who posed for her," Scherer notes. "Indians from Fort Hall entered her studio from another world, one full of pressures to assimilate and become 'white,' but many of them resisted those pressures and maintained their own integrity."

In some instances, Wrensted did document the accommodation of American Indians to the white culture. For example, she shot two portraits of Pat Tyhee, a Bannock. In the first, he is dressed in traditional clothing. In the second photograph, Tyhee is wearing a business suit. "One critical point is that Wrensted did not go out to the reservation, prying into teepees and shooting people without their permission," Scherer says. "All her customers, Indian and Anglo, came to her and paid to have their portraits taken"

"There are no typical members of the Northern Shoshone and Bannock community: each is an individual. Nor are there any typical photographs: each results from the interaction of photographer and subject at a moment of history and from the viewers' reading of the image. Until we can fully integrate this methodology into photo research, we will too often fall into the trap of reinforcing exotic stereotypes of the 'other'" (Scherer: 1994).

"This is a wonderful collection, interesting and very different," says Rayna Green, director of the American Indian Program at the Smithsonian's National Museum of American History. "There is relatively little photography of the Shoshone and Bannock Indians during this period."

"Looking at her photography cheers me up, because she wasn't trying to document the last Native Americans," Green says. "Everyone should see these pictures. They will give you a different take on the people of this time period—both Indian and white."

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[See "Teacher's Corner: Studying Photographs as Historical Documents," beginning on page 14.]



Fig. 2: Minnie Camas Willie, the photo on the far right hem of Ella's dress. CREDIT: National Archives and Records Administration, Still Picture Branch: 75-SEI-8.

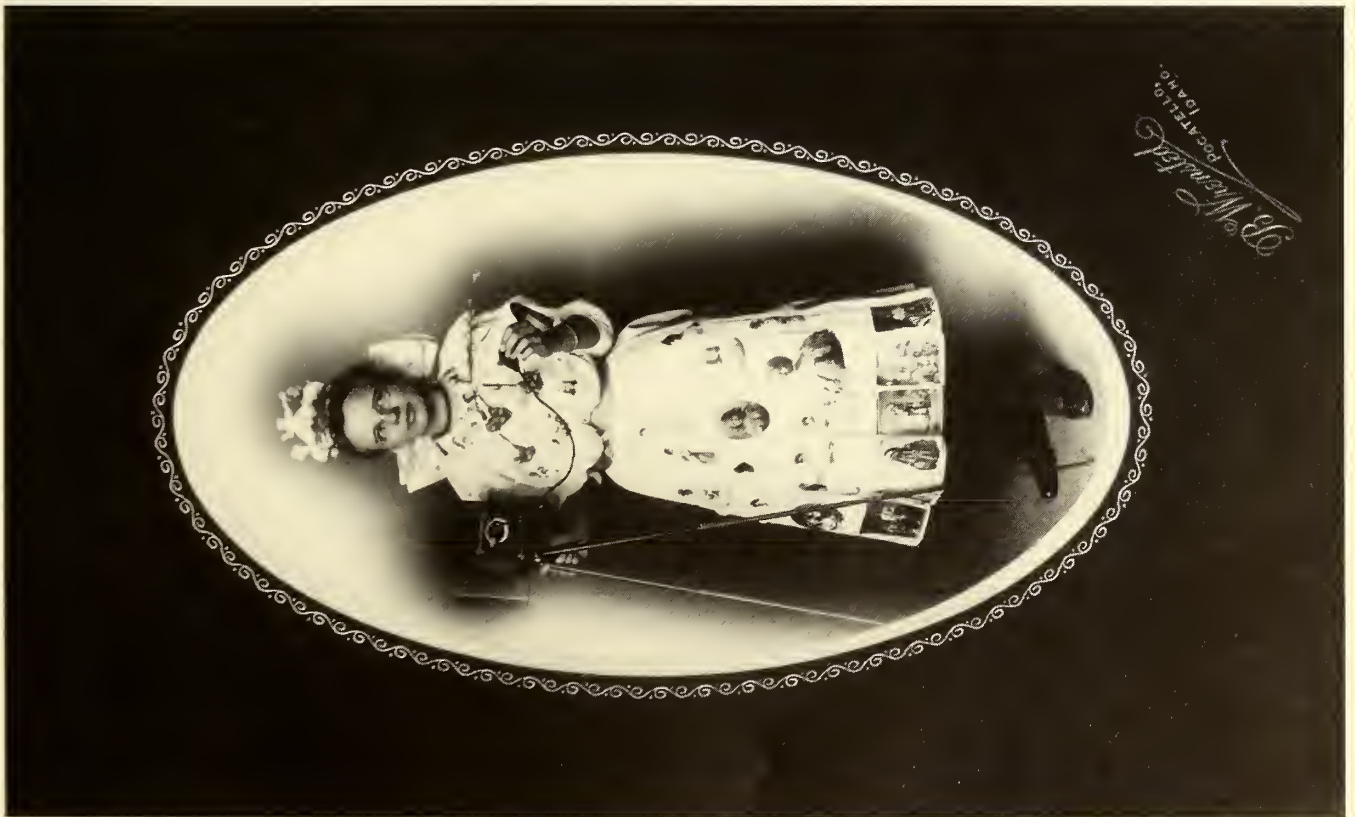


Fig. 1: Ella Wrensted, photographed about 1909. CREDIT: Smithsonian Institution, Handbook of North American Indians Project: Sherwood Collection.



Fig. 4. Sho-Ban cowboy, probably Jim Marshall. CREDIT: National Archives and Records Admin., Still Picture Branch: 75-SEI-108.



Fig. 3: Logan Appenay, Bannock. CREDIT: National Archives and Records Admin., Still Picture Branch: 75-SEI-59.



Fig. 5: Pat Tyhee, Bannock "Before" (on left) and "After." CREDIT: Smithsonian Institution, National Anthropological Archives: Eugene O. Leonard Collection.



Fig. 6: Wrensted's first studio in Pocatello, Idaho, 1905. CREDIT: Smithsonian Institution, Handbook of North American Indians Project: Sherwood Collection.

TEACHER'S CORNER: STUDYING PHOTOGRAPHS AS HISTORICAL DOCUMENTS

Directions for Class Activity:

I. Divide the class into small groups. Have each group study the seven photographs shown and record what the clothing, props, and background seem to say about each person and about Wrensted's studio. Also have students note questions they have about each picture. Each group then shares perceptions and questions, noting similarities and differences.

[As a practice exercise for students who have not studied photographs as historical documents, you may want to have your students bring in photographs of themselves or their family that are several years old. Give each student a photograph belonging to someone else in the class and ask them to examine the clothes, background, and props to see how much they can glean about the person(s) in the picture. Next have them consider what distortions or lies might occur about the person from looking at the picture. Then have the owner of the photograph explain it.]

II. Share the following information about each photograph with the students and have the groups note how it alters or confirms their own observations in Part I.

Figure 1. Ella Wrensted was Benedicte's niece and one of her assistants. In 1909 she was seventeen-years-old. In this photograph, she wears a dress decorated with portraits made by the Wrensted studio. This photograph probably was used for promotional purposes. Her surviving sister, Helen Wrensted Sherwood (b. 1907), believes that Ella took almost all of the photographs that were made outside the studio, including those at the Fort Hall Indian Reservation. Ella Wrensted later became a commercial photographer in Wyoming, continuing the family tradition of women photographers.

Figure 2. Minnie Camas Willie is a Northern Shoshone. Wrensted usually posed the Northern Shoshone and Bannock full-length, which

emphasized clothing. Minnie Willie's clothing is traditional. In creating an image of Northern Shoshone and Bannock Indians, Wrensted sometimes used certain props to enhance the subject, such as blankets that appear on the floor or were draped over a chair, couch, or table. Although Anglos had their photographs taken in the same studio with the same backdrop, blankets were never used. Of course, Wrensted was not the only photographer to use the blanket to symbolize Indianness. For some Indians the blanket signified their refusal to adopt Anglo dress and habits. We do not know for certain whether Minnie Willie or Benedicte Wrensted chose the clothing or the blanket in this photograph.

Figure 3. Logan Appenay, a Bannock, is dressed in his Grass Dance regalia. He is wearing beaded moccasins with flaps and designs influenced by Métis or Cree styles. He also wears beaded garters, anklets with bells, a beaded bandolier and breechcloth, oxford shirt with floral bead yoke and cuffs, a choker, and multiple necklaces. His long underwear shows dirt smudges on the right leg indicating the likelihood that his costume was not just for show. The long underwear was adopted during this period because of sensitivity to the impact of "nakedness," probably serving the same function as body paint. The Grass Dance celebrated early spring and was performed to ensure plentiful food, such as salmon, berries, and grasses (Scherer, 1994: 352).

If people did not know Logan Appenay only wore this costume for the Grass Dance, how would this photograph perpetuate the stereotypical view of the Indian as Noble Savage?

Figure 4. This Northern Shoshone is dressed as a cowboy, most likely indicating his work as a rancher. The usual "Indian" props are not evident. The backdrop of water, reeds, and other plants is most likely Wrensted's attempt to portray the Northern Shoshone Indian in a natural setting. What stereotype might such a backdrop reinforce? [Indians' natural closeness to nature.]

Figure 5. Pat Tyhee, a Bannock Indian, had these "Before" and "After" shots taken most likely on the

same day to show his progressive learning (Scherer, 1993: 16). The caption for the left image reads, "Pat Tyhee before haircut and new suit." That for the right image reads, "Just had a new suit of clothes and had his hair cut."

These historical images reflect official U.S. policy toward the Indian. There was a concerted effort by Indian agents to urge men to cut their hair and wear non-Indian clothes. According to the local newspaper: "In May 1901 Agent A.F. Caldwell announced that the Indian Department had generously provided a number of new farm wagons for those interested in farming, but no Indian would receive one until he agreed to a haircut....As the Indians lined up, two barbers spent an entire day cutting the long braids of Indian farmers, who reluctantly submitted to the 'civilizing' ordeal in order to get some wheels" (Madsen 1980:187; *Pocatello Tribune*, May 2 1901, p. 187).

Pat Tyhee was promoted as a progressive Indian and was supported by the Anglo power structure. He was, for example, selected by Agent Major Caldwell to be one of four representatives of the tribe at the inauguration of President Taft in Washington, D.C. in 1909 (Scherer, 1993:16; *Pocatello Tribune*, January 28, 1909).

How does Pat Tyhee's clothing change your perception of him?

Figure 6: Wrensted's first studio as it appeared in 1905 was located at 132 South Main Street. Wrensted's niece, Ella, is in front of the studio with their dog, Jackson. The display cases show Wrensted's photographs, but none of these appears to be of the Shoshone and Bannock Indians from the Fort Hall Reservation.

III. Have your students discuss or write about the following questions that explore the larger implications of the photographs.

1. Photographs can be valuable sources for historical and anthropological study. Each photograph is an historical document and thus constitutes primary research material. Even though you have just a small sample of Wrensted's

photographs, what could be the possible historical and anthropological value of her work? From another perspective, do the photographs preserve the heritage of the Northern Shoshone from Fort Hall Reservation? If so, how do they? What do you think you can really tell about the Native Americans in Wrensted's photographs? Are these photographs different from others you have seen of Native Americans? If so, how and why? Consider the questions in Part I. Which ones remain unanswered? Can we rely on photographs alone for a complete story?

2. Is it possible to tell whether the clothes, decorations, and other props are from the people themselves or from the photographer's studio? How does your answer affect your ability to assess the truth of the photographs? Do you think Native Americans should be careful about how they photograph themselves? Why?

3. How do the photographs reinforce or undermine stereotypes?

4. How does the individual identity of the person come through in the photographs?

5. What can we deduce about the conventions of portrait photography in Wrensted's time? [Formal, no candid photographs, theatrical lighting, studios as stage sets.]

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The entire Wrensted exhibit can be found on the WEB: <http://www.nmnh.si.edu/anthro/wrensted>.

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Handbook of North American Indians
National Museum of Natural History

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- 2) to help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of curriculum subjects; and
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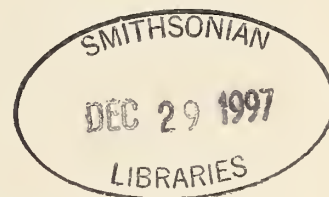
EXPLORING OUR BASIC HUMAN NATURE ARE HUMANS INHERENTLY VIOLENT?

by Robert W. Sussman

Are human beings forever doomed to be violent? Is aggression fixed within our genetic code, an inborn action pattern that threatens to destroy us? Or, as asked by Richard Wrangham and Dale Peterson in their recent book, *Demonic Males: Apes and the Origins of Human Violence*, can we get beyond our genes, beyond our essential "human nature"?

Wrangham and Peterson's belief in the importance of violence in the evolution and nature of humans is

based on new primate research that they assert demonstrates the continuity of aggression from our great ape ancestors. The authors argue that 20-25 years ago most scholars believed human aggression was unique. Research at that time had shown great apes to be basically non-aggressive gentle creatures. Furthermore, the separation of humans from our ape ancestors was thought to have occurred 15-20 million years ago (Mya). Although Raymond Dart, Sherwood Washburn, Robert Ardrey, E.O. Wilson



Inside: "Kennewick Man"; Think Tank Exhibit; Race Relations; Laotian Refugee Women ; New Resources

and others had argued through much of the 20th century that hunting, killing, and extreme aggressive behaviors were biological traits inherited from our earliest hominid hunting ancestors, many anthropologists still believed that patterns of aggression were environmentally determined and culturally learned behaviors, not inherited characteristics.

Demonic Males discusses new evidence that killer instincts are not unique to humans, but rather shared with our nearest relative, the common chimpanzee. The authors argue that it is this inherited propensity for killing that allows hominids and chimps to be such good hunters.

According to Wrangham and Peterson, the split between humans and the common chimpanzee was only 6-8 Mya. Furthermore, humans may have split from the chimpanzee-bonobo line after gorillas, with bonobos (**pygmy chimps**) separating from chimps only 2.5 Mya. Because chimpanzees may be the modern ancestor of all these forms, and because the earliest australopithecines were quite chimpanzee-like, Wrangham speculates (in a separate article) that "chimpanzees are a conservative species and an amazingly good model for the ancestor of hominids" (1995, reprinted in Sussman 1997:106). If modern chimpanzees and modern humans share certain behavioral traits, these traits have "long evolutionary roots" and are likely to be fixed, biologically inherited parts of our basic human nature and not culturally determined.

Wrangham argues that chimpanzees are almost on the brink of humanness:

Nut-smashing, root-eating, savannah-using chimpanzees, resembling our ancestors, and capable by the way of extensive bipedalism. Using ant-wands, and sandals, and bowls, meat-sharing, hunting cooperatively. Strange paradox...a species trembling on the verge of hominization, but so conservative that it has stayed on that edge.... (1997:107).

Wrangham and Peterson (1996:24) claim that only two animal species, chimpanzees and humans, live in patrilineal, male-bonded communities "with

intense, male initiated territorial aggression, including lethal raiding into neighboring communities in search of vulnerable enemies to attack and kill." Wrangham asks:

Does this mean chimpanzees are naturally violent? Ten years ago it wasn't clear....In this cultural species, it may turn out that one of the least variable of all chimpanzee behaviors is the intense competition between males, the violent aggression they use against strangers, and their willingness to maim and kill those that frustrate their goals....As the picture of chimpanzee society settles into focus, it now includes infanticide, rape and regular battering of females by males (1997:108).

Since humans and chimpanzees share these violent urges, the implication is that human violence has long evolutionary roots. "We are apes of nature, cursed over six million years or more with a rare inheritance, a Dostoyevskyan demon...The coincidence of demonic aggression in ourselves and our closest kin bespeaks its antiquity" (1997:108-109).

Intellectual Antecedents

From the beginning of Western thought, the theme of human depravity runs deep, related to the idea of humankind's fall from grace and the emergence of original sin. This view continues to pervade modern "scientific" interpretations of the evolution of human behavior. Recognition of the close evolutionary relationship between humans and apes, from the time of Darwin's *Descent of Man* (1874) on, has encouraged theories that look to modern apes for evidence of parallel behaviors reflecting this relationship.

By the early 1950s, large numbers of australopithecine fossils and the discovery that the large-brained "fossil" ancestor from Piltdown, in England, was a fraud, led to the realization that our earliest ancestors were more like apes than like modern humans. Accordingly, our earliest ancestors must have behaved much like other non-human primates. This, in turn, led to a great interest in

using primate behavior to understand human evolution and the evolutionary basis of human nature. The subdiscipline of primatology was born.

Raymond Dart, discoverer of the first australopithecine fossil some thirty years earlier, was also developing a different view of our earliest ancestors. At first Dart believed that australopithecines were scavengers barely eking out an existence in the harsh savanna environment. But from the fragmented and damaged bones found with the australopithecines, together with dents and holes in these early hominid skulls, Dart eventually concluded that this species had used bone, tooth and antler tools to kill, butcher and eat their prey, as well as to kill one another. This hunting hypothesis (Cartmill 1997:511) "was linked from the beginning with a bleak, pessimistic view of human beings and their ancestors as instinctively bloodthirsty and savage." To Dart, the australopithecines were:

confirmed killers: carnivorous creatures that seized living quarries by violence, battered them to death, tore apart their broken bodies, dismembered them limb from limb, slaking their ravenous thirst with the hot blood of victims and greedily devouring livid writhing flesh (1953:209).

Cartmill, in a recent book (1993), shows that this interpretation of early human morality is reminiscent of earlier Greek and Christian views. Dart's (1953) own treatise begins with a 17th century quote from the Calvinist R. Baxter: "of all the beasts, the man-beast is the worst/ to others and himself the cruellest foe."

Between 1961-1976, Dart's view was picked up and extensively popularized by the playwright Robert Ardrey (*The Territorial Imperative, African Genesis*). Ardrey believed it was the human competitive and killer instinct, acted out in warfare, that made humans what they are today. "It is war and the instinct for territory that has led to the great accomplishments of Western Man. Dreams may have inspired our love of freedom, but only war and weapons have made it ours" (1961: 324).

Man the Hunter

In the 1968 volume *Man the Hunter*, Sherwood Washburn and Chet Lancaster presented a theory of "The evolution of hunting," emphasizing that it is this behavior that shaped human nature and separated early humans from their primate relatives.

To assert the biological unity of mankind is to affirm the importance of the hunting way of life....However much conditions and customs may have varied locally, the main selection pressures that forged the species were the same. The biology, psychology and customs that separate us from the apes .. we owe to the hunters of time past .. for those who would understand the origins and nature of human behavior there is no choice but to try to understand "Man the Hunter" (1968:303).

Rather than amassing evidence from modern hunters and gatherers to prove their theory, Washburn and Lancaster (1968:299) use the 19th-century concept of cultural "survivals": behaviors that persist as evidence of an earlier time but are no longer useful in society.

Men enjoy hunting and killing, and these activities are continued in sports even when they are no longer economically necessary. If a behavior is important to the survival of a species...then it must be both easily learned and pleasurable (Washburn & Lancaster, p. 299).

Man the Dancer

Using a similar logic for the survival of ancient "learned and pleasurable" behaviors, perhaps it could easily have been our propensity for dancing rather than our desire to hunt that can explain much of human behavior. After all, men and women love to dance; it is a behavior found in all cultures but has even less obvious function today than hunting. Our love of movement and dance might explain, for example, our propensity for face-to-face sex, and even the evolution of bipedalism and the movement of humans out of trees and onto the ground.

Could the first tool have been a stick to beat a dance drum, and the ancient Laetoli footprints evidence of two individuals going out to dance the "Afarensis shuffle"? Although it takes only two to tango, a variety of social interactions and systems might have been encouraged by the complex social dances known in human societies around the globe.

responses have been fashioned through this life style. With caution, we can compare the most widespread hunter-gatherer qualities with similar behavior displayed by some of the non-human primates that are closely related to Man. Where the same pattern of traits occurs in...most or all of those primates--we can conclude that it has been subject to little evolution. (Wilson 1976, in Sussman 1997: 65-66).

Wilson's theory of sociobiology, the evolution of social behavior, argued that:

- (1) the goal of living organisms is to pass on one's genes at the expense of all others;
- (2) an organism should only cooperate with others if :
 - (a) they carry some of his/her own genes (kin selection) or
 - (b) if at some later date the others might aid you (reciprocal altruism).

To sociobiologists, evolutionary morality is based on an unconscious need to multiply our own genes, to build group cohesion in order to win wars. We should not look down on our warlike, cruel nature but rather understand its success when coupled with "making nice" with some other individuals or groups. The genetically driven "making nice" is the basis of human ethics and morality.

Throughout recorded history the conduct of war has been common.. some of the noblest traits of mankind, including team play, altruism, patriotism, bravery...and so forth are the genetic product of warfare (Wilson 1975:572-3).

The evidence for any of these universals or for the tenets of sociobiology is as weak as was the evidence for Dart's, Ardrey's and Washburn and Lancaster's theories of innate aggression. Not only are modern gatherer-hunters and most apes remarkably non-aggressive, but in the 1970s and 1980s studies of fossil bones and artifacts have shown that early humans were not hunters, and that weapons were a later addition to the human repertoire. In fact, C.K. Brain (1981) showed that



Sociobiology and E.O. Wilson

In the mid-1970s, E.O. Wilson and others described a number of traits as genetically based and therefore human universals, including territoriality, male-female bonds, male dominance over females, and extended maternal care leading to matrilineality. Wilson argued that the genetic basis of these traits was indicated by their relative constancy among our primate relatives and by their persistence throughout human evolution and in human societies. Elsewhere, I have shown that these characteristics are neither general primate traits nor human universals (Sussman 1995). Wilson, however, argued that these were a product of our evolutionary hunting past.

For at least a million years--probably more--Man engaged in a hunting way of life, giving up the practice a mere 10,000 years ago....Our innate social

the holes and dents in Dart's australopithecine skulls matched perfectly with fangs of leopards or with impressions of rocks pressing against the buried fossils. Australopithecines apparently were the hunted, not the hunters (Cartmill, 1993, 1997).

Beyond Our Genes

Wrangham and Peterson's book goes beyond the assertion of human inborn aggression and propensity towards violence. The authors ask the critical question: Are we doomed to be violent forever because this pattern is fixed within our genetic code or can we go beyond our past? -- get out of our genes, so to speak.

The authors believe that we can look to the bonobo or pygmy chimpanzee as one potential savior, metaphorically speaking.

Bonobos, although even more closely related to the common chimpanzee than humans, have become a peace-loving, love-making alternative to chimpanzee-human violence. How did this happen? In chimpanzees and humans, females of the species select partners that are violent. ... "while men have evolved to be demonic males, it seems likely that women have evolved to prefer demonic males...as long as demonic males are the most successful reproducers, any female who mates with them is provided with sons who themselves will likely be good reproducers" (Wrangham and Peterson 1996:239). However, among pygmy chimpanzees females form alliances and have chosen to mate with less aggressive males. So, after all, it is not violent males that have caused humans and chimpanzees to be their inborn, immoral, dehumanized selves, it is rather, poor choices by human and chimpanzee females.

Like Dart, Washburn, and Wilson before them, Wrangham and Peterson believe that killing and violence is inherited from our ancient relatives of the past. However, unlike these earlier theorists,

Wrangham and Peterson argue this is not a trait unique to hominids, nor is it a by-product of hunting. In fact, it is just this violent nature and a natural "blood lust" that makes both humans and chimpanzees such good hunters. It is the bonobos that help the authors come to this conclusion. Because bonobos have lost the desire to kill, they also have lost the desire to hunt.

...do bonobos tell us that the suppression of personal violence carried with it the suppression of predatory aggression? The strongest hypothesis at the moment is that bonobos came from a chimpanzee-like ancestor that hunted monkeys and hunted one another. As they evolved into bonobos, males lost their demonism, becoming less aggressive to each other. In so doing they lost their lust for hunting monkeys, too....Murder and hunting may be more closely tied together than we are used to thinking (Wrangham and Peterson 1996:219).



The Selfish Gene Theory

Like Ardrey, Wrangham and Peterson believe that blood lust ties killing and hunting tightly together but it is the killing that drives hunting in the latter's argument. This lust to kill is based upon the

sociobiological tenet of the selfish gene. "The general principle that behavior evolves to serve selfish ends has been widely accepted; and the idea that humans might have been favored by natural selection to hate and to kill their enemies has become entirely, if tragically, reasonable" (Wrangham and Peterson 1996:23).

As with many of the new sociobiological or evolutionary anthropology theories, I find problems with both the theory itself and with the evidence used to support it. Two arguments that humans and chimpanzees share biologically fixed behaviors are: (1) they are more closely related to each other than chimpanzees are to gorillas; (2) chimpanzees are a good model for our earliest ancestor and retain conservative traits that should be shared by both.

The first of these statements is still hotly debated and, using various genetic evidence, the chimpanzee-human triage is so close that it is difficult to tell exact divergence time or pattern among the three. The second statement is just not true. Chimpanzees have been evolving for as long as humans and gorillas, and there is no reason to believe ancestral chimps were similar to present-day chimps. The fossil evidence for the last 5-8 million years is extremely sparse, and it is likely that many forms of apes have become extinct just as have many hominids.

Furthermore, even if the chimpanzee were a good model for the ancestral hominid, and was a conservative representative of this phylogenetic group, this would not mean that humans would necessarily share specific behavioral traits. As even Wrangham and Peterson emphasize, chimps, gorillas, and bonobos all behave very differently from one another in their social behavior and in their willingness to kill conspecifics.

Evidence Against "Demonic Males"

The proof of the "Demonic Male" theory does not rest on any theoretical grounds but must rest solely on the evidence that violence and killing in chimpanzees and in humans are behaviors that are similar in pattern; have ancient, shared evolutionary roots; and are inherited. Besides killing of

conspecifics, Wrangham "includes infanticide, rape, and regular battering of females by males" as a part of this inherited legacy of violent behaviors shared by humans and chimpanzees (1997:108).

Wrangham and Peterson state: "That chimpanzees and humans kill members of neighboring groups of their own species is...a startling exception to the normal rule for animals" (1996:63). "Fighting adults of almost all species normally stop at winning: They don't go on to kill" (1996:155). However, as Wrangham points out there are exceptions, such as lions, wolves, spotted hyenas, and I would add a number of other predators. In fact, most species do not have the weapons to kill one another as adults.

Just how common is conspecific killing in chimpanzees? This is where the real controversy may lie. Jane Goodall described the chimpanzee as a peaceful, non-aggressive species during the first 24 years of study at Gombe (1950-1974). During one year of concentrated study, Goodall observed 284 agonistic encounters: of these 66% were due to competition for introduced bananas, and only 34% "could be regarded as attacks occurring in 'normal' aggressive contexts" (1968:278). Only 10 percent of the 284 attacks were classified as 'violent', and "even attacks that appeared punishing to me often resulted in no discernable injury...Other attacks consisted merely of brief pounding, hitting or rolling of the individual, after which the aggressor often touched or embraced the other immediately (1968:277).

Chimpanzee aggression before 1974 was considered no different from patterns of aggression seen in many other primate species. In fact, Goodall explains in her 1986 monograph, *The Chimpanzees of Gombe*, that she uses data mainly from after 1975 because the earlier years present a "very different picture of the Gombe chimpanzees" as being "far more peaceable than humans" (1986:3). Other early naturalists' descriptions of chimpanzee behavior were consistent with those of Goodall and confirmed her observations. Even different communities were observed to come together with peaceful, ritualized displays of greeting (Reynolds

(continued on page 17)

"KENNEWICK MAN" A TEACHER FOR ALL AGES

Why would a group of physical anthropologists and archaeologists have to go to court for the right to study a 9,200-year-old skeleton they consider one of the most important discoveries ever made in this country?

This past July, a U.S. District Court judge issued a ruling that may make such study possible and clarified many of the controversial issues surrounding the bones of "Kennewick Man."

Who is "Kennewick Man?"

On July 28, 1996, two college students watching a boat race spotted a skull in the banks of the Columbia River near Kennewick, Washington. Thinking it a murder victim, they called the sheriff's office. The skull was taken to the local coroner who called upon the assistance of a local forensic archaeologist, who, after recovering the rest of the skeleton, requested a CAT scan. The skeleton at first appeared to be that of an early European settler until a stone spear point was found embedded in the hip bone. Radiocarbon dating placed the skeleton's age at 9,200 years ago.

From preliminary observations, it appeared that "Kennewick Man" died around the age of 50. He possessed some bodily and facial features that differ from the Native Americans of that region. His long and narrow skull, large jaw with a pronounced chin, and arms long in proportion to the rest of his body raise the question of Kennewick's ancestry and his relationship to modern Native Americans.

Conflicting Claims

The skeleton was found on land belonging to the Army Corps of Engineers. A coalition of five Northwest tribes, led by the Confederated Tribes of the Umatilla Indian Reservation, filed a claim with the Corps asking for the return of the skeleton, which they said should be buried immediately in a secret location without scientific study.

After the Umatilla filed a claim for the skeleton, the Corps of Engineers decided to hand over the Kennewick remains to the tribal coalition. The Corps, meanwhile, had denied requests from several prominent scientists to carry out scientific studies of this rare and ancient find, which might shed light on life at the end of the Pleistocene. The Corps also denied the completion of a DNA analysis that had been started by the University of California-Davis, offered at no cost to the Corps. To safeguard the remains, Kennewick Man was taken by the Corps to a vault at the Batelle Pacific Northwest National Laboratory in Richland, Washington, where it remains today.

The Corps' actions were based on their interpretation of the Native American Graves Protection and Repatriation Act, which defines "Native American" as "of, or relating to, a tribe, people or culture that is indigenous to the United States." According to Alan L. Schneider, counsel for the scientists objecting to the Corps' actions,

Congress's use of the present tense would seem to imply that it did not intend for human remains and other 'cultural items' to be subject to the act unless there is a demonstrated relationship to present-day Native Americans. What kind of relationship this requires and how it is to be established are issues that have yet to be resolved...In the Kennewick Man case, there is no evidence at this point to support the Army Corps' decision. (*Anthropology Newsletter*, February 1997:18).

In recent years, Native Americans actively have sought to halt archaeological excavations on their lands. Some believe that Native Peoples originated in this land and that their ancestors did not cross the Bering Strait; therefore, any skeletons found must be directly related to indigenous Native Peoples and must be returned. Many consider human remains sacred and should not be the object of study.

On the other side of the controversy stand the scientists, whose new scientific techniques such as DNA analysis and CAT scans, along with meticulous methods of recording data, have made it possible to obtain information on skeletal remains

not available before. Such studies do not cause significant harm to the remains. Scientists are interested in comparing the remains of Kennewick Man with those of similar age found in Nevada, Texas, Colorado, and Minnesota.

Scientists have long been involved in studies of skeletal materials to obtain information about nutrition, disease, lifestyles, health, and cause of death of early populations in North America. The human skeleton provides a detailed record of the life of an individual and thus remains an extremely important source of information about past lifeways.

The Court Case

Once the Corps decided to turn the remains over to the tribal coalition, eight prominent anthropologists, including two Smithsonian scientists acting in their capacity as private citizens, sought a legal restraining order from the U.S. Courts to halt the Corps' transfer of the Kennewick remains to the Umatilla. The scientists stated that the skeleton, one of the oldest and most complete ever found, should be made available for scientific study. Only a few well-preserved skeletons more than 8,000 years old have ever been discovered, and hence Kennewick is of interest to scientists worldwide.

The court's decision came this past July, one year after the skeleton was discovered. The Judge sent the case back to the Corps of Engineers, telling the Corps to reconsider its earlier decision to turn the skeleton over to the Umatilla without further study. The Court criticized the Corps' handling of the case, calling it "arbitrary" and "capricious." Among other things, the Court stated that the Corps:

acted before it had all of the evidence or fully appreciated the scope of the problem. The agency did not fully consider or resolve certain difficult legal questions. The agency assumed facts that proved to be erroneous. The agency failed to articulate a satisfactory explanation for its action. By the agency's own admission, any decision in this matter was premature and ought to be set aside and the matter remanded to the agency for

further consideration (Civil No. 96-1481-JE Court's Opinion p. 31).

The Judge went on to explain that the Corps must take a fresh look at all the legal issues and fully reopen the matter. Meanwhile, the government was to retain custody of the Kennewick remains, and not dispose of them before full resolution of the issues had been made. The Corps must reconsider the plaintiffs' request for permission to study the remains, protect them for their value for scientific study, and consider, among others, the following issues:

- a) Whether the remains are subject to NAGPRA;
- b) What is meant by terms such as "Native American" and "indigenous" in the context of NAGPRA and the facts of this case;
- c) Whether NAGPRA applies to remains from a population that is not directly related to modern Native Americans;
- d) The level of certainty required to establish biological or cultural affiliation;
- e) Whether there is evidence of a link, biologically or culturally, between the remains and a modern Native American tribe; and
- f) Whether scientific study and repatriation of the remains are mutually exclusive or if both objectives can be accommodated.

Scientific Studies

Scientists believe that science should have a role in the determination of what happens to the Kennewick remains. Within the context of repatriation, scientists examine bones in museum collections to establish correct cultural affiliation and ensure that Native Americans receive the bones of their ancestors through repatriation transfers of museum collections. Sophisticated techniques such as craniofacial analysis involving a system of complex measurements and angles help identify the specific ethnic and tribal group to which the materials belong. For example, distinct differences among Native American populations enable scientists to distinguish a Paiute from a Cheyenne. Other physical anthropology studies have revealed

(continued on page 19)

THINK TANK

by Benjamin B. Beck

[Editor's Note: Although most *AnthroNotes* readers will never go into the field like Robert Sussman to study primates in the wild, a new exhibition at the Smithsonian's National Zoological Park invites visitors to better understand primates through cognitive research, including research on captive animals. In the following comments, Benjamin Beck, Associate Director for Biological Programs and one of Think Tank's chief developers, shares with our readers the concepts and goals of this extraordinary new exhibition.]

Think Tank is the first-ever zoo or museum exhibit about animal thinking, or animal cognition, a vital scientific subject of great interest both to scientists and the general public. In Think Tank we actually try to do sound, interesting, original scientific research--right in front of the public. We draw the public into a dialogue that helps them better understand a scientific approach to the topic, and lets them think critically about it.

If you visit Think Tank, you will see written texts with supporting photographs and animals on display that demonstrate the various points being made about animal, including human, cognition. But the linch-pin of the Think Tank Program is real-time research-on-exhibit.

The big challenge is the subject matter, since thinking is invisible. We can't measure it, weigh it, or time it directly, depriving us of some of our best scientific tools. So, we turn to the study of behavior by using experimentally controlled situations, and then make inferences about the animals' thinking. And, most importantly, we have real scientists, supported on Think Tank research fellowships, conducting research on the animals in the exhibition. We make clear to our visiting scientists that they not only have to conduct research, but conduct it on exhibit and interpret it for the public. And our visitors, particularly teachers and students from area high schools and colleges, have responded enthusiastically.

One of Think Tank's popular exhibits is the "O-Line" for the orang utans, who pass outside along



the "high wire" from one building to the other, morning and evening. This pioneering feature of the exhibit engages the visitor in a very empathetic way, as the visitors watch the graceful orang utans move across the O-Line from one part of the exhibition to the other.

The biggest problem we had to confront is that cognition, being invisible, complicates the exhibit. To understand cognition we must rely on inferences from behavior: hence our research on display, on self-recognition, spatial learning, object constancy, the discovery and spread of social traditions, and tool use among monkeys and orang utans. At any one time we and our visitors might watch those



primates cooperate to get a pan of choice food or observe an orang utan learning abstract symbols ("words") that represent objects and then try to make inferences about thinking from the observed behaviors.

The exhibition combines traditional panel displays and text, animal observation, and real-time scientific research with scientists interacting with the public.

"Think Tank" puts "thinking" on the front burner, seen in the animals' behavior, the scientists' research, or the visitors' engagement in understanding the complex and fascinating realm created by the Think Tank environment.

Benjamin Beck is Associate Director for Biological Programs at the National Zoological Park

ANTHROPOLOGY CAN PROMOTE BETTER RACE RELATIONS

by Robert Sussman

President Bill Clinton should consider expanding the new advisory board on race relations to include an anthropologist.

Given the history of poor race relations in the United States, anthropologists, trained to bridge the gap between cultures and understand social processes, are especially well suited to play a major role in Clinton's plan to address current racial divisiveness.

Although some may view anthropologists as an esoteric group of social scientists digging up old bones or recording the behavior of chimpanzees, anthropologists with their international perspective on human behavior and society, from prehistory to the present, can provide rich information about human diversity and help combat problems related to misunderstandings over this diversity. Issues of interest to anthropologists are issues of the modern world from AIDS to homelessness to international economic interdependence.

As cross-cultural experts in human behavior and evolution, anthropologists can be non-judgmental when examining the issues at the root of the problem and provide a broader, cultural, human context for such questions as "What exactly is race?" "What are the causes of racism?" and "What are its consequences?"

Through ethnographic studies, anthropologists have found American notions of race are often derived from misunderstood and misused physical criteria (such as skin color, hair type, facial structure and body build), leading to conclusions that race is based on biological rather than social categories that carry with them presumed characteristics as well as social status.

For example, anthropologists have noted that Americans may accept that people brought up in Samoa have a different history, culture and world view than people in Australia, but they generally are much less aware of the equally dramatic cultural differences and history of isolation among racial groups in the United States.

As a case in point, black people brought up in the South may have a different subculture than white people from the same region. While Americans tend to assume that the differences between these groups are based on biological racial differences, in reality, the genetic differences between blacks and whites are quite small; about 85 percent of human genetic variation is explained by differences between individuals and only 15 percent by differences among "races."

Racism arises when those within differing ethnic groups develop hostilities toward and prejudices

about those outside their own group or subculture, often due to a lack of both understanding and tolerance. In the United States, racism is due, in part, to Americans marginalizing groups, condemning those groups for not buying into mainstream society, and, finally, stereotyping others of like ethnic groups as part of those marginalized groups.

Since biological anthropologists and geneticists can demonstrate conclusively that the problems of crime, drug abuse and poverty are not based on racial biology, we must turn to other explanations. In the case of the black urban poor, for example, behaviors considered "maladaptive" to mainstream society actually may be "adaptive" survival strategies, anthropologically speaking, given the hopeless situations some people face.

Anthropologists historically have been at the forefront of debunking theories about the biological basis of racial differences. As early as 1911, Franz Boas challenged the "eugenics" movement and the view that differences in race, ethnic group and social class were due to innate capacities. Boas' radical view at the time was that behavioral differences among ethnic groups were not genetically based, but

caused by environmental factors and "culture" - derived from people's varying histories and experiences. Other leading anthropologists such as Margaret Mead, Ruth Benedict and Ashley Montagu have been key figures in the debate over the essence of race.

Anthropology is itself at a crossroads and must again become central to the public debate on racism. As experts in comparing different societies and identifying the core cultural reasons behind certain behaviors, anthropologists can help us understand the need for education, for policies reversing socio-economic conditions and for a culture of tolerance in which we appreciate the richness of different subcultures.

Above all, anthropologists must lead the charge in recognizing that we are one species, and that no evolutionary evidence exists to demonstrate that one culture or ethnic group is supreme.

Robert Sussman has been named editor-in-chief of American Anthropologist, the journal of the American Anthropological Association. The first issue under Sussman's editorship, which will be published in September 1998 marking the journal's 100th anniversary, will focus on race and racism.

AAA WORKSHOPS FOR TEACHERS

In recent years the American Anthropological Association (AAA) has made efforts to reach out to the precollegiate educational community. This year *The Teaching of Anthropology: Problems, Issues, and Decisions* was published by Mayfield Publishing Company in association with the AAA. The AAA has also organized Saturday workshops for precollege teachers at their annual meetings.

At this year's annual meeting in Washington DC, November 19-23, the AAA collaborated with local teachers, curriculum specialists, and anthropologists to present the following workshops:

"Understanding Cultures in the Schools."
"Human Biodiversity."

"Intrigue of the Past: Scientific Methods Through Archaeology."

"Cultural Perspectives on Students with Special Needs."

"Tapping into Household Funds of Knowledge."

"Dialect Awareness."

"Educating African Americans: What Works?"

Next year's annual meeting will take place in Philadelphia, and local teachers will be invited to participate. To keep informed of AAA educational programs and publications, contact their web page at <http://www.ameranthassn.org/> or Patsy Evans, education coordinator, whose email address is pevans@ameranthassn.org.

LAO REFUGEE WOMEN TAKE CONTROL

by Ruth Krulfeld

How do refugee communities mobilize, organize, and negotiate power within their new dominant societies?

The answer is especially important in this time of widespread xenophobia; funding cuts; and legislation against legal and undocumented refugees, immigrants, migrant workers, and their children. Refugees lose power through forcible uprooting, interim resettlement, and eventual resettling in new societies. Under these circumstances, refugees come with limited abilities to cope and often end up in the lowest social and economic strata of society. When self-empowerment occurs, it has far-reaching consequences for self-esteem, self-determination, and access to status and resources.

This article focuses on refugee women and their self-empowerment through the formation of a new organization for women, The Lao-American Women's Association (LAWA). My research with the Lao community began in 1981. Understanding the construction of organizations for self-empowerment has implications not only for academic research but also for public policy, provision of service, and human rights.

LAWA

LAWA began as an idea around 1993; in 1995 the association was granted non-profit status. LAWA is crucial to self-protection as well as self-actualization. Lao women, although influential within the home, are disadvantaged in the public sphere, where any power they may have is usually covert. One of the officers of the women's organization explained that women had to raise men's self-esteem by publicly showing deference to them, and even performing public rituals of self-deprecation relative to men. Another officer listed numerous cases of deferential treatment of men here and in Laos, such as the monthly offerings of flowers and incense women traditionally made in Laos in supplication--or, as she put it, "worship,"--to their husbands. In Laos, the husband attended

PTA meetings, always representing the family outside the home. According to gender cosmology in Lao Buddhism, women must be reborn as men in order to become monks, thus maximizing their chances to attain both great social status and enlightenment.

In mobilizing women to form LAWA after resettlement, the women challenged these gender restrictions--and confronted opposition. Since the planners and workers in this new organization all hold at least one--and sometimes two or more--full-time jobs, have families and great social demands on their time, their involvement in this new organization represents both daring and commitment. Such involvement is even more significant because challenging traditional status is very uncomfortable in a society in which non-confrontation is so highly valued--more so for women.

Focus of Research

My research focused on several questions: 1) Why did these Lao women decide to organize and continue in the face of strong opposition; 2) What was the opposition and why did it occur; 3) Which influences promoted this organization; 4) Were there any precedents for it; 5) Why did it occur when it did; 6) What problems arose both internally and externally; and 7) What was the impact of the organization on both women who joined and the Lao community?

New organizations such as LAWA are likely to begin only after refugees have acquired such necessities as learning a new language, job skills, housing, and financial security, permitting them to concentrate on less immediately demanding matters. LAWA was started 16 to 20 years after initial resettlement by most Lao refugees.

Addressing Community Problems

Who begins such an organization and why? The organizers of LAWA were interested in attaining public prestige and self-empowerment and alleviating certain community problems. Prior to LAWA, the organizations in this enclave refugee

society were male-run--most of them highly politicized and in conflict. There had been twelve opposed political parties in this relatively small population, all with the agenda of reclaiming the Lao government and each with a different idea of what to do with it when they got it back. Mobilization for these men's political organizations began early on. They were recently formed into one large association, with a board and membership comprised of men, under which all Lao organizations were to be subsumed. Even the PTA was male-run. The political conflicts between such organizations and the battles for personal power between men limited most other activity for community causes, except that already in-place, such as traditional cooperation to organize celebrations and rituals.

The women felt that the community was now established enough that major problems should be addressed. The existing male-run Lao organizations were doing no more than talking about problems. The women felt motivated to take action on such issues as isolation and alienation among the Lao elderly, the threat of loss of Lao culture, the generation gap between children who spoke only English and numerous Lao parents and grandparents who either spoke no English or barely understood it and who did not understand the culture in which their children were growing up. Health issues were also a concern, as was domestic abuse, alcoholism, gangs, and children in prison. As social services and outside funding have become increasingly restricted, the women felt the community had to break the pattern of dependency that had become established for many Lao. So, community concerns and lack of action by male-run organizations provided the initial impetus for Lao women to mobilize.

Women Take Action

The LAWA board members turned their attention to the following:

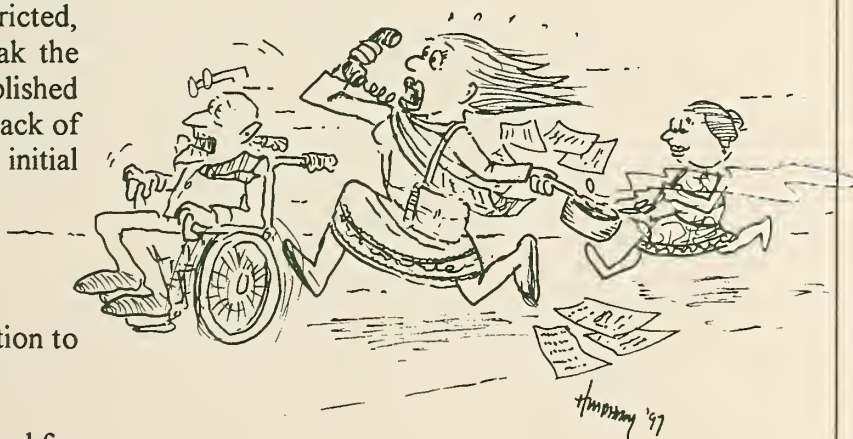
1) Running the Lao language and culture school for the purposes of preserving Lao culture, reducing inter-generational conflict, giving Lao children a sense of ethnic identity and self-esteem, and

reducing involvement of youth in gangs and other dysfunctional behavior.

2) Publishing and circulating a newsletter, with information on immigration, citizenship, health, resources for the elderly, schools, SAT exams, advanced placement courses, and women's conferences. Also included was recognition of students who make honors, stay in school and graduate; women who obtain degrees; and Lao who achieve honors in the wider society.

3) As far as time and resources permit, visiting and cooking for the elderly, the ill, and providing transportation to doctors.

4) At their general meeting in November 1996, the women planned to enlarge their mandate to include organizing monthly meals and meetings for Lao elderly and arranging transportation for them. Because of increasing problems for aliens obtaining welfare and health benefits, the women decided to provide classes to prepare people for the citizenship exam. They will also coordinate transportation to class and to the Immigrant and Naturalization Services (INS) for those who need it. They voted to set up a telephone hotline to remind women in the community to do monthly breast examinations and have annual pap smears. They also decided to teach Lao cooking, taking turns in holding classes in members' homes.



Running the Lao language and culture school constitutes a major drain on time and resources, especially since the five most highly committed women, who now constitute the LAWA board, do

all the coordinating and most of the work, with only sporadic help from the other 32 women in the association.

Precedents

Since the women maintain contact with family and friends in Laos, influences from that country and the Laotian diaspora also help explain why these women mobilized for power. The tradition of women in social action, although restricted in the public sphere, was not altogether lacking in Laos before refugee resettlement. Although a few women had the combination of boldness, education, and elite status to have their ideas heard and accepted, such gender power was highly restricted. A women's organization in Laos, begun as an auxiliary in the 1930s, cooked for Lao soldiers during the war for Lao independence from France. This organization only gained independent status and government recognition as the Women's Union after the communist revolution. Its members now work in what Lao women here termed "the quiet way that Lao women have" to campaign against polygyny in Laos. They also have submitted a grant proposal to the International Voluntary Service for training volunteers to educate the public in Laos about AIDS. One of the leaders of the women's organization here, who is a board member of IVS, translated their proposal.

American and world concern over women's status and access to public power probably has had an even greater affect on these refugee women. One recently received her B.A. with a certificate in women's studies from an American university. Although initially she was reluctant to become involved with LAWA, because of time pressures of study and family, she eventually decided she wanted to contribute to her community and took a position of leadership in the organization. She produces LAWA's newsletter, which she sends not only to the Lao community but to Lao all over the world.

Two older elite women have exercised some degree of overt power and continue to work individually for community action. However, LAWA was established and is led by women without such elite connections. Their lack of high social status in the

enclave community slowed the progress of the community in accepting the new organization, and did little to protect them from their opposition's criticisms and accusations. However, the board members believe that the older elite feminists have too little contact with the current situation here to act as leaders of this new refugee organization.

Obstacles

Obstacles have come from within the community. On numerous occasions hate mail was sent to the whole Lao community accusing the board members of the women's association of being communists and working for the embassy. This attack was carefully constructed to turn a refugee community that had suffered greatly at the hands of communists against the organization and its organizers, despite the lack of basis for these accusations. These letters, which named names and sometimes included crude caricatures, were always sent out to the Lao community at the time the women's organization publicized major initiatives. For example, the women mailed flyers to the community on the



registration dates for the Lao school, or on a fund-raising party they hosted, or when they sent invitations to the women of the community to attend the first general meeting since their initial mobilization. In one hate mailing, the LAWA insignia with its drawing of a traditionally clad Lao woman encircled by the name of the organization was replaced with the communist symbol. Another mailing calling them "communist bitches" was circulated before the second registration period at the school.

In my interviews with Lao men, I was told that these women were working against the established organizations, and that they ought to work within organizations that were already in place instead of duplicating effort. Some men said that they had heard awful things about these women and their organization. Two men told me that LAWA was really a pawn of the embassy and that the board members were communist, explaining how awful that is for people who suffered so much at the hands of the communists. The women told me that the men "want us to work for them silently in the background and they'll take credit for everything we do, just as they usually do. We refused to be part of that, although we did it by saying we would be glad to help them in any way possible." Two leaders of the women's organization felt that the officials of the male-run Lao organization were continually trying to co-opt them, since both women--one of whom is likely to be voted the next president of the woman's organization--were offered an official position in the male-run organization. Both refused, feeling that it was done to sabotage LAWA. Many of the men forbade their wives to go to LAWA meetings or join LAWA. Given the Lao value on avoidance of confrontation, the tactics employed by these men have been somewhat effective in keeping some Lao away from the women's organization and its projects.

The Lao school initially became divided with LAWA in charge of one day of classes and a male-run organization taking over the second day. Conflicts between them caused one leader to resign and declare that he was voting to give the whole school over to the women to run, so that the other man would have to work under female jurisdiction.

Basically, the women already controlled the school. The power play his action involved was obvious to the women who continue to sponsor the school. It is interesting to note that when the male leader resigned, he took with him the many children of his friends and relatives who had previously been enrolled. His resignation coincided with a community-wide rumor that the entire school had closed. This precipitated a crisis of declining enrollment, which the women creatively handled through a new way of attracting children to the school. Enrollment rose from a low of 5 students in 1996 to 26 by the end of the last academic year.

Perserverence and Results

Despite problems such as some interpersonal conflict among members, discouragement at lack of more immediate community-wide acceptance and appreciation for their efforts, the scarcity of funding and other resources, attempts to co-opt them, and the debasing criticism they have suffered, the women's commitment has continued. They keep trying to widen their mandate to alleviate other serious problems that plague the Lao community. The women gave several reasons for persevering in the face of great opposition. One important factor was that Lao women are accustomed to working together cooperatively with little public or individual recognition for their efforts. Typically, this is done in traditional areas such as cooking for the monks, ceremonies, and social events for which women go about getting things done and men take public and official credit.

Much of the women's dedication results from their success in accomplishing results no other organization or group in the community has achieved. This was helped by their ability to work together despite conflicts that have arisen. Their empowerment is evident in the strength of their commitment, and their roles are now public. Their newsletter circulates throughout the Laotian diaspora with its news of the activities of these women. The Lao school continues despite its ups and downs and plans are being made to address additional community problems. Some of the women have represented their community and organization at women's conferences and meetings

in the wider society and even internationally. They are proud of their achievements and speak with pride of their own empowerment.

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Ruth Krulfeld is professor of anthropology at The George Washington University.

NEW RESOURCES FOR TEACHERS

Free Modules for Teaching Anthropology

The AAA's Council for General Anthropology has produced three modules for teaching physical anthropology:

Module 1: "Name That Fossil: An Exercise in Hominid Taxonomy" by Patricia C. Rice and Philip L. Stein includes introductory reading, sheets of "fossil skulls," and further instructions for teachers.

Module 2: "Races Versus Clines" by Leonard Lieberman and Patricia Rice shows that traits used to identify "races" (skin color, stature, hair form, etc.) do not covary. Instead they show independent clines.

Module 3: "The Race Concept 1997" by Leonard Lieberman provides an update on the issue of what is race and how anthropologists deal with the subject.

To obtain a free copy of any of these modules, write or email Patricia Rice, Department of Sociology and Anthropology, West Virginia University, Morgantown, WV 26505-6326, email: price@wvu.edu.

Seeing Anthropology, Cultural Anthropology Through Film by Karl Heider (Allyn and Bacon, 1997).

A one hour and 40 min. video accompanies this book containing film segments that match each chapter. Book chapters cover topics for introductory anthropology classes including fieldwork, the culture concept, production, exchange, psychology and culture, religion, and the contemporary world.



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Available Spring 1998 from the Smithsonian Institution Press.

("Human Nature" continued from page 6)

and Reynolds 1965; Suguyama 1972. Goodall 1968).

Then, between 1974 and 1977, five adult males from one subgroup were attacked and disappeared from the area, presumably dead. Why after 24 years did the patterns of aggression change? Was it because the stronger group saw the weakness of the other and decided to improve their genetic fitness. But surely there were stronger and weaker animals and subgroups before this time. Perhaps we can look to Goodall's own perturbations for an answer. In 1965, Goodall began to provide "restrictive human-controlled feeding." A few years later she realized that

the constant feeding was having a marked effect on the behavior of the chimps. They were beginning to move about in large groups more often than they had ever done in the old days. Worst of all, the adult males were becoming increasingly aggressive. When we first offered the chimps bananas the males seldom fought over their food;....now...there was a great deal more fighting than ever before....(Goodall 1971:143).

The possibility that human interference was a main cause of the unusual behavior of the Gombe chimps was the subject of an excellent, but generally ignored book by Margaret Power (1991). Wrangham and Peterson (1996:19) footnote this book, but as with many other controversies, they essentially ignore its findings, stating that yes, chimpanzee violence might have been unnatural behavior if it weren't for the evidence of similar behavior occurring since 1977 and "elsewhere in Africa" (1996:19).

Further Evidence

What is this evidence from elsewhere in Africa? Wrangham and Peterson provide only four brief examples, none of which is very convincing:

(1) Between 1979-1982, the Gombe group extended its range to the south and conflict with a southern group, Kalande, was suspected. In 1982, a "raiding" party of males reached Goodall's camp. The authors state: "Some of these raids may have been lethal" (1996:19). However, Goodall describes this "raid" as follows: One female "was chased by a Kalande male and mildly attacked....Her four-year-old son...encountered a second male--but was only sniffed" (1986:516). Although Wrangham and Peterson imply that these encounters were similar to those between 1974-77, no violence was actually witnessed. The authors also refer to the discovery of the dead body of Humphrey; what they do not mention is Humphrey's age of 35 and that wild chimps rarely live past 33 years!

(2) From 1970 to 1982, six adult males from one community in the Japanese study site of Mahale disappeared, one by one over this 12 year period. None of the animals were observed being attacked or killed, and one was sighted later roaming as a solitary male (Nishida et al., 1985:287-289).

(3) In another site in West Africa, Wrangham and Peterson report that Boesch and Boesch believe "that violent aggression among the chimpanzees is as important as it is in Gombe" (1986:20). However, in the paper referred to, the Boesch's simply state that encounters by neighboring chimpanzee communities are more common in their site than in Gombe (one per month vs. 1 every 4 months). There is no mention of violence during these encounters.

(4) At a site that Wrangham began studying in 1984, an adult male was found dead in 1991. Wrangham states: "In the second week of August, Ruizoni was killed. No human saw the big fight" (Wrangham & Peterson 1996:20). Wrangham gives us no indication of what has occurred at this site over the last 6 years.

In fact, this is the total amount of evidence of warfare and male-male killing among chimpanzees after 37 years of research!! The data for infanticide and rape among chimpanzees is even less impressive. In fact, data are so sparse for these behaviors among chimps that Wrangham and

Peterson are forced to use examples from the other great apes, gorillas and orangutans. However, just as for killing among chimpanzees, both the evidence and the interpretations are suspect and controversial.

Can We escape Our Genes?

What if Wrangham and Peterson are correct and we and our chimp cousins are inherently sinners? Are we doomed to be violent forever because this pattern is fixed within our genetic code?

After 5 million years of human evolution and 120,000 or so years of *Homo sapiens* existence, is there a way to rid ourselves of our inborn evils?

What does it do for us, then, to know the behavior of our closest relatives? Chimpanzees and bonobos are an extraordinary pair. One, I suggest shows us some of the worst aspects of our past and our present; the other shows an escape from it....Denial of our demons won't make them go away. But even if we're driven to accepting the evidence of a grisly past, we're not forced into thinking it condemns us to an unchanged future (Wrangham 1997:110).

In other words, we can learn how to behave by watching bonobos. But, if we can change our inherited behavior so simply, why haven't we been able to do this before *Demonic Males* enlightened us? Surely, there are variations in the amounts of violence in different human cultures and individuals. If we have the capacity and plasticity to change by learning from example, then our behavior is determined by socialization practices and by our cultural histories and not by our nature! This is true whether the examples come from benevolent bonobos or conscientious objectors.

Conclusion

The theory presented by Wrangham and Peterson, although it also includes chimpanzees as our murdering cousins, is very similar to "man the hunter" theories proposed in the past. It also does not differ greatly from early European and Christian

beliefs about human ethics and morality. We are forced to ask:

Are these theories generated by good scientific fact, or are they just "good to think" because they reflect, reinforce, and reiterate our traditional cultural beliefs, our morality and our ethics? Is the theory generated by the data, or are the data manipulated to fit preconceived notions of human morality and ethics?

Since the data in support of these theories have been weak, and yet the stories created have been extremely similar, I am forced to believe that "Man the Hunter" is a myth, that humans are not necessarily prone to violence and aggression, but that this belief will continue to reappear in future writings on human nature. Meanwhile, primatologists must continue their field research, marshaling the actual evidence needed to answer many of the questions raised in Wrangham and Peterson's volume.

Robert Sussman is professor of anthropology at Washington University at St. Louis and editor of the American Anthropologist, the journal of the American Anthropological Association.

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("Kennewick" continued from page 8)

that some groups have displaced others in distinct geographic regions, rather than one culture evolving directly into the other.

Establishing clear cultural affiliation of such an early individual to any present-day Native American group is likely impossible. Scientific study of Kennewick Man and other early remains, however, can help answer questions not only about the life and health of early inhabitants of North America, but also the range of physical types or human variation of these early people. Investigating these areas may help solve other mysteries, such as the puzzle of the origin of the Ainu people of Hokkaido, Japan, who are considered perhaps the oldest population of that region with features resembling those of caucasoids--more body hair, less facial flatness.

For many, "Kennewick Man," along with other very ancient remains, holds national and international significance, and therefore represents an inheritance for the entire human family.

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- 2) to help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of curriculum subjects; and
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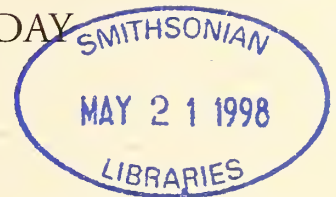
ANTHRONOTES

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ANTHROPOLOGY AND THE ISSUES OF OUR DAY

by James L. Peacock



[Editors' Note: The *AnthroNotes* editors asked James Peacock, President of the American Anthropological Association (1993-95) what he sees as the future for anthropology as we approach a new millennium.]

In the presidential address to the American Anthropological Association in 1995, I sketched three possible scenarios for anthropology in the 21st century:

1. Death, extinction.
 2. Living death. Anthropology as an enclave: irrelevant, cherishing ideas once avant garde, and now quaint. In this vision, anthropology consists of disorganized, slightly intriguing and amusing nay-saying eccentrics who relish vaguely-recalled avant-garde ideas from the 20th century but who are merely a curiosity in the 21st.
 3. Life. Anthropology remains intriguing and creatively diverse, iconoclastic, and breathtaking in breadth and perception, profound in scholarship but integral and even leading in addressing the complex challenges of a transnational yet grounded humanity.
- In this third scenario, anthropology builds on its strengths (e.g., undergraduate teaching) and diminishes its weaknesses (its marginality despite its scope, and its presence everywhere yet nowhere in academia and society).

The community of K-12 teachers is one of the two or three most crucial arenas in which to broaden the dialogue between anthropology and our wider

society. I am delighted, therefore, to join that dialogue through this invited article honoring the 20th anniversary of *AnthroNotes*.

This article is written in the hope that more anthropologists and teachers will find ways to help our discipline achieve the third scenario by addressing and helping to solve the great issues of our day.

I speak from both inside and outside anthropology. I am an unrepentant, un-deconstructed anthropologist. During the past seven years, I have spent as much time outside the discipline as inside. Various elected posts, including chair of faculty at my university, have brought more interdisciplinary than disciplinary work, allowing me to see enormous opportunities for the discipline of anthropology.

The mutual engagement of anthropologists and academics with teachers and others (such as legislators) in community settings (such as town meetings or conferences) addressing issues of concern to all is worth considering. This could be an alternative to the hierarchical and unidirectional model of the anthropologist or other academic as "expert," conveying wisdom to others such as teachers or students.

Trends in Anthropology

The history of anthropology over the last one hundred years can be divided into three phases or orientations: past, present, and future. Beginning in the late

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nineteenth century, anthropology focused on the past: human origins and evolution. Edward Tylor, holding at Oxford the first academic appointment in anthropology, signifies this focus (*Primitive Cultures*, 1871). In the early twentieth century, anthropology began to focus on the present: ethnography, describing contemporary living peoples. Malinowski's fieldwork during World War I (*Argonauts of the Western Pacific*,

1922) signaled the advent of this phase. Then in the beginning of the mid-twentieth century, after World War II, anthropology was oriented more toward the future through concern with change, "practice" (how people use cultural rules to negotiate their lives), and shaping the future. Sir Edmund Leach, a pupil of Malinowski, inaugurated this phase with his 1954 publication, *Political Systems of Highland Burma*.

This analysis does not say that focusing on the past or present is obsolete. On the contrary, the tracing of human origins and evolution remains our bread and describing living peoples (ethnography) our butter. Understanding where we come from and who we are are still the fundamental questions of anthropology. Nor is it to say that anthropology is or should become only future oriented, in the manner of authors Alvin Toffler (*Future Shock*, 1970) or Peter Drucker (*Post Capitalist Society*, 1993). However, I do believe there is and should be an emerging emphasis on dynamism and activism—grasping and shaping the future. Hence my two slogans: (1) the future of anthropology is the future and (2) the future of our mastery is the mastery of our future.

The most recent epoch has been a troubled one, marked by two complementary trends: turning inward and turning outward. The inward turning is exemplified by the notorious reflexive or postmodernist navel-gazing: the anthropologist, like many other academics, reflecting on his- or herself and discipline and questioning/deconstructing both.

The outward turning is exemplified by the growth in applied anthropology, the practice of anthro-

pology in the world at large. Half the anthropologists with new doctorates now take jobs outside the academy. Thus my third slogan: you get the most out of anthropology by getting out of it provided, of course, you carry its wisdom with you as you go out to work in the world. It is these ambassadors who often have the opportunity to be engaged in the issues of our day.

Anthropology's Contributions

What should emerge from anthropology's engagement with human issues? How can we get better at doing it constructively and publicly?

Margaret Mead is a good example of one who publicly addressed issues of society, promoting anthropology as a useful perspective. Some of anthropology's current intellectual leaders waste valuable public opportunities by airing arcane debates internal to the discipline and tedious to those outside—not to mention some of us inside the discipline.

Anthropology has a distinctive and difficult intellectual task. Carrying it out, anthropologists perform miracles. What is this task? Another slogan "backwards and in high heels" sums it up. When Ginger Rogers asked what it was like to dance with Fred Astaire, she replied, "I do everything he does, backwards and in high heels." Anthropologists do that so to speak, compared to other thinkers. They engage the categories of our society, such as democracy or capitalism, then throw our own anthropological concepts into the dialogue with exotic ones—a dance if you like—thus forcing us to rethink our own categories and our own society. We are to most intellectuals as Ginger was to Fred.

A basic contribution of anthropology is to honor and understand local knowledge. "Local" is sometimes far away, sometimes close by, but always localized, immediate, and thus subordinated to the so-called global—to turn that local wisdom back on our own taken-for-granted categories of wisdom and morality.

I affirm and applaud the miraculous achievements of anthropologists today and over the past hun-



NAVEL-GAZING



DECONSTRUCTION

dred years who are the real heroes and heroines, putting themselves at risk in every way—physically, psychologically, culturally, professionally—to do what nobody else does: to reach out into incredibly remote or different or challenging situations and make sense of them—brilliantly. Anthropologists really do miracles.

But somehow we need to do more miracles and within the public sphere. Thus, public or perish. By public I mean not publicity but engaging serious public issues, sometimes publicly, deploying our special strengths, our miracles, in so doing—in forums ranging from schools to town meetings.

Issues to Embrace

What kinds of issues should we engage?

The gamut—from human rights to environmental destruction to creating viable national or international culture, to poverty, homelessness, and the 45 million refugees in the world today. We anthropologists already contribute importantly to such issues but vastly less than we could and should.

One general issue bears directly on the future of our discipline and to which our discipline offers special wisdom—the issue of globalism.

One aspect of globalism is often identified by two terms: the information revolution and the management revolution. The information revolution pertains to the growth of the computer technology in every sphere, from banking to teaching. The management revolution pertains to the growth of management in a corporate or business model in every sphere, from health delivery to education. Both so-called revolutions are driven by globalistic capitalism, where the ultimate goal and value is the bottom line. To maximize profit, human values are subordinate to this one value.

Thus, in health care, some HMOs may subordinate the Hippocratic oath to economics; in education, downsizing replaces humanistic ideals of education with a piecemeal model, so that temporary employees replace the classic academic community, which united scholarship, mentoring, governance, and public service as a full-time, life-long calling. The result is that for short-time savings, schools or the academy sometimes resemble sweat shops.

We anthropologists must force the “real world” leaders to think hard about the long-term consequences of undermining the educational endeavor and other societal processes by the information and management revolutions.

A counter to this trend of profit-making is suggested by the modifying adjective: global. Globalization bears a relationship to particularized groundings: to local identities, region, kin, community, and to the ground itself—nature, the environment. Globalization works in many ways to destroy these groundings; perhaps in other ways it can affirm them. Anthropology is the discipline perhaps best equipped to grasp at once the global and local/particularized and to probe the ways these seemingly opposed trends relate and could relate. I call this relationship GLOB GRO—global and ground.

Hence, the management revolution and the information revolution should engage anthropological analysis; they are both global and “cross-cultural.”

Globalism or the broader relationship of “glob-gro” takes anthropology far beyond the stones and bones that are its staple. Engagement with globalism as an issue brings anthropology into the classroom and into the community in a way that deploys the discipline’s full spectrum from evolution to ethnography.

The Teaching of Anthropology

What abides and what should abide in the teaching of anthropology?

First, I would nominate, especially, telling the human story—prehistory and history—our most solid and publicly recognized contribution. Second, I would incorporate new twists such as gender and ideology into ethnography and comparison and continue the study of the sustaining institutions, such as religion and the family (kinship). The most exciting work combines history or prehistory and ethnography; for example, Charles Hudson’s work on DeSoto and the Spanish era in American history (*Hernando de Soto and the Indians of Florida*, 1993), offers a fine tie-in between ethnography and early American history. Ecological frameworks also provide excellent ways to join the so-called four fields (and more), in pushing issues of the environment, both natural and cultural.



How can we encourage anthropology departments to engage more with the issues of our day and departments to work more with local school systems?

I caution my colleagues to sustain the basics; nobody else will. But think flexibly about these; the four fields are better conceived, I think, as force fields—as dynamic tensions among biological and cultural, theory and practice, positivism and interpretivism, past and present orientations—rather than as fixed sub-disciplines. Second, consider mustering support for selected ways to help anthropology reach out:

- ◆ Offer fellowships or prizes for public anthropology; that is, for anthropologists, here or overseas, who develop cogent ways of engaging public issues. University news bureaus can offer editorial assistance and contacts to help researchers turn findings into commentaries on public issues, which could appear in forums ranging from “Weekly Reader” for pupils to the *Atlanta Constitution*, *Washington Post*, or *New York Times* op-ed pieces.

- ◆ Offer fellowships that combine research and teaching. Worldteach is my name for a program that would offer doctoral candidates two-years support: funding for a year of international fieldwork and a year of writing, provided the student returns, in that second year, to teach what is learned in fieldwork to undergraduates or K-12 students. In short, share the miracle—the truly astounding insights and experiences of fieldwork, which are fresh when you return.

- ◆ Define some societal issues that can be a focus for analysis and public communication. Work with local schools to organize forums that engage teachers, students, and parents around those issues.

- ◆ Organize an educational experience around a local issue, for example, the Nike course. Nike shoes gives \$11 million to our university’s athletic program. Students and faculty protest because of the sellout to commerce and specifically to Nike with its sweatshops in Southeast Asia. As a forum for students, faculty, and others to explore this issue, three of us, including our current faculty chair, are offering a course on Nike, including all the contexts and issues. Nike people have come, critics will come, and Nike has offered to pay for trips to SE Asia to see the factories. We read scholarly works and do field trips to local textile mills for comparative purposes. Students, thereby, gain in-depth exposure to a societal issue, part of globalization, in which they are engaged.

Conclusion

I encourage teachers to approach anthropologists in their communities about getting involved in K-12 education. Taking the initiative might in turn stimulate anthropologists to reach out and form collaborative efforts.

Anthropology departments or individual anthropologists, who decide to collaborate on issues with K-12 classrooms or schools, can receive some help from

the AAA's long-range plan, which has as one major objective "engagement of the discipline with societal issues."

Many of the 400 departments and programs of anthropology are already doing outstanding outreach to their communities, including schools and teachers. More might do so if approached by the schools in the 3,000 counties where the 400 programs are distributed. Some may fear that this outreach will cause anthropology to lose its moorings as a learned discipline and turn it into just another servant of our globalizing, downsizing, greed-driven, exploitative society, stripping us of our scholarly, scientific capacity that can also back up a critical capacity. That would be tragic. However, I contend that outreach can spur inreach: scholarly revitalization through engagement.

Anthropology's special perspective is precious. It is time to engage better, to deploy our wisdom creatively outward. If we do it right, we can revitalize our

scholarly and scientific endeavors by fueling them with wider dialogue and bigger work.

James Peacock is the Kenan Professor of Anthropology, University of North Carolina-Chapel Hill and past President of the American Anthropological Association.

Postscript: Some publications that may be useful to educators wishing to explore collaborative programs are:

AAA Guide. Lists academic anthropology departments and programs, museums, research firms, and government agencies. Available from the American Anthropological Association, 4350 North Fairfax Dr., Suite 640, Arlington, VA 22203-1620; (703) 528-1902 ext. 3032; E-mail: <http://www.ameranthassn.org>. \$40 for AAA members; \$55 for non-members.

Why Belong? A conversation about cultural anthropology with James Peacock by Carol Ball Ryan (Chandler and Sharp, 1975) discusses possible links between anthropology and schools. Some of these ideas are in *The Anthropological Lens*. Cambridge University Press, 1986, reprinted 1996.



MATERIALS AVAILABLE FROM THE ANTHROPOLOGY OUTREACH OFFICE

"1998 Summer Fieldwork Opportunities."

The following teacher packets consist of bibliographies; teaching activities and resources; and articles, some of which were previously published in *AnthroNotes*.

■ "Teacher's Resource Packet: Anthropology," consists of 32 pieces of informational material.

■ "Teacher's Resource Packet: American Indians" for K-12 consists of 20 pieces of informational material.

To order, write: Anthropology Outreach Office, NHB MRC 112, Smithsonian Institution, Washington, DC 20560. Please limit request to one copy; duplicate as many copies as you require.

Smithsonian Resource Guide for Teachers is a catalog listing materials from all the museums and other educational facilities associated with the Smithsonian. The first copy is free; additional copies are \$5 each.

Order from: Smithsonian Office of Education, Arts & Industries Bldg., Room 1163, MRC 402, Washington, DC 20560. The guide is also available on the Internet:

<http://educate.si.edu/intro.html>. The Smithsonian Home Page address is <http://www.si.edu>.

MAMMOTH EXCAVATION ON THE WEB

Between April 13 to May 15, 1998, researchers from the Center for Indigenous Research will be excavating a Columbian mammoth, which died between 11,000 to 13,000 years ago, near Ruidoso, New Mexico. As part of the dig, daily images of the excavation will be uploaded onto the Center's web site for anyone to follow the dig as it unfolds. Viewers will also be able to email questions to the researchers in the field and participate in the dig without actually being in the field. A curriculum that covers mammoths, archaeology, and paleontology will be made available. Visit the dig at www.virtualelpasso.com/archaeology.

COMMUNICATION AND THE FUTURE OF AMERICAN ARCHAEOLOGY

by Jeremy A. Sabloff



[Following are excerpts from a revised text of the Distinguished lecture in Archeology at the 95th Annual Meeting of the AAA, held in San Francisco, California, November, 1996. Sabloff demonstrates the convergence of anthropology's and archeology's concerns with reaching out to the public in general and teachers specifically on the issues of our day.]

In the 19th century, archaeology played an important public and intellectual role in the fledgling United States. Books concerned wholly or in part with archaeology were widely read. Data from empirical archaeological research, which excited public interest and was closely followed by the public, indicated that human activities had considerable antiquity and that archaeological studies of the past could throw considerable light on the development of the modern world.

As is the case in most disciplines, as archaeology became increasingly professionalized throughout the 19th century and as academic archaeology emerged in the late 19th and early 20th centuries, the communications gap between professionals and the public grew apace. This gap was particularly felt in archaeology because amateurs had always played an important part in the archaeological enterprise.

The professionalization of archaeology obviously has had innumerable benefits; the discipline has little resemblance to the archaeology of 100 years ago. With all the advances in method, theory, and culture historical knowledge, archaeologists are now in a position to make important and useful statements about cultural adaptation and development that should have broad intellectual appeal. Ironically, though, the professionalization or academization of archaeology is working against broadly disseminating current archaeological understanding of the past.

I am convinced that as archaeology rapidly expanded as an academic subject in U.S. colleges since World War II, the competition for university jobs and the institutional pressures to publish in quantity and in peer reviewed journals has led to the devaluation by

academics of popular writing and public communication. Such activities just do not count, or even worse, count against you.

If some academics frown upon popular writing, even more do they deride popularization in other media, such as television. Consequently too few archaeologists venture into these waters. Why should the best known "archaeologist" to the public be an unrepentant looter like Indiana Jones? Is he the role model we want for our profession? We need more accessible writing, television shows, videos, CD-ROMS, and the like with archaeologists heavily involved in all these enterprises.

It is depressing to note that the academic trend away from public communication appears to be increasing just as public interest in archaeology seems to be reaching new heights. If we abandon much of the popular writing to the fringe, we should not be surprised at all that the public often fails to appreciate the significance of what we do.

How can American archaeologists promote more popular writing by professional scholars? The answer is deceptively simple: we need to change our value system and our reward system within the academy. Just as Margaret Mead and other anthropological popularizers have been sneered at by some cultural anthropologists, so our Brian Fagans are often subject to similar snide comments. We need to celebrate those who successfully communicate with the public, not revile them. Ideally, we should have our leading scholars writing for the public, not only for their colleagues. Some might argue that popular writing would be a waste of their time. To the contrary, I would maintain that such writing is part of their academic responsibility. Who better to explain what is on the cutting edge of archaeological research than the field's leading practitioners? We need to develop a number of our own Stephen Jay Goulds or Stephen Hawkings.

Not only do we need to change our value system so that public communication is perceived in a posi-

live light, more particularly, we need to change the academic evaluation and reward system for archaeologists (and others!), so that it gives suitable recognition to popular writing and public outreach. Effective writing for general audiences should be subject to the same kind of qualitative academic assessment that ideally goes on today in any academic tenure, promotion, and hiring procedures. However, such a development goes against the current pernicious trend which features the counting of peer reviewed articles and use of citation indices...The whole academic system of evaluation...needs to be rethought...and the growing trend away from qualitative evaluation is especially worrisome.

As a call to action, in order to encourage popular writing among academics, particularly those with tenure, all of us need to lobby university administrators, department chairs, and colleagues about the value and importance of written communication with audiences beyond the academy. Academics should be evaluated on their popular as well as their purely academic writings. Clearly what is needed is a balance between original research and popular communication. In sum, evaluations should be qualitative, not quantitative.

There clearly is a huge irony here. The academic world obviously is becoming increasingly market-oriented with various institutions vying for perceived "stars" in their fields with escalating offers of high salaries, less teaching, better labs, more research funds, and so on. Most academics not only are caught up in this system but have bought into it. At the same time, those scholars who are most successful in the larger market place of popular ideas and the popular media and who make dollars by selling to popular audiences are frequently discounted and denigrated by the self-perceived "true schol-

ars.” These latter often have totally bought into the star-centered broad academic market economy and are busy playing this narrower market game!

In order to fulfill what I believe is one of archaeology's major missions, that of public education, we need to make some significant changes in our professional modes of operation. This is a four-field problem with four-field solutions! The Society for American Archaeology has just endorsed public education and outreach as one of the eight principles of archaeological ethics...I strongly believe that we must change our professional value system so that public outreach in all forms, but especially popular writing, is viewed and supported in highly positive terms.

It is my belief that, unfortunately, the bridge to the 21st century will be a shaky one indeed for archaeology and anthropology—perhaps even the proverbial bridge to nowhere unless we tackle the communication problem with the same energy and vigor with which we routinely debate the contentious issues of contemporary archaeological theory. The fruits of our research and analyses have great potential relevance for the public at large. The huge, exciting strides in understanding the past that anthropological archaeology has made in recent years need to be brought to the public's attention both for our sakes and theirs!

Jeremy Sabloff is director of the University of Pennsylvania Museum and past president of the Society for American Archaeology.

[The complete article should appear in the December 1998 issue of the *American Anthropologist* 100(4). Members of the American Anthropological Association (AAA) receive this publication. For information on joining the AAA, write: AAA, 4350 N. Fairfax Dr., Suite 640, Arlington, VA 22203.; e-mail: <http://www.ameranthassn.org/>]



THE ART OF ANTHROPOLOGY

by Robert L. Humphrey



[Editors' Note: Robert Humphrey's cartoons have amused *AnthroNotes* readers for twenty years. In celebration of his work, we present excerpts from an original essay written for the new publication *Anthropology Explored: The Best of Smithsonian AnthroNotes*, available from the Smithsonian Institution Press. See pp.18–19 of this issue for a full description of this new publication as well as information on ordering a copy. Excerpts from Humphrey's chapter are presented with permission from the Smithsonian Institution Press.]

The ability to make and understand cartoons represents some of the most complex symbolic thought, expression and self-reflection of which we humans are capable.

Admittedly, it is sometimes difficult to find the humor in some of the articles in *AnthroNotes*. Not all cartoons are meant to be funny, but they are intended to combine visual elements in such a way as to startle—to capture our attention and focus it momentarily on a new idea, or on a familiar idea seen from a new perspective. By synthesizing multiple elements into a single focus, cartoon art causes us to see an event or phenomenon through new eyes, making us laugh, or even to think! . . .

A good cartoon simplifies, distills, and refines an event until it instantly communicates a moment in time that the artist has singled out as being different from the preceding moment or the next one. Immediacy is the essence of a successful cartoon. . .

As an anthropologist, I particularly enjoy drawing for *AnthroNotes* because I am able to work as an artist and anthropologist simulta-

neously. Every drawing is an ethnography or archeological site of its own—a specific time and place, a complete environment peopled by thinking, behaving, interactive beings. Further, I suspect there is no better guide to the morality, politics, religions, social issues—in short, the culture—of our times than our cartoons. . .

As an anthropologist, I realize it is important to symbolize without stereotyping, to lampoon a serious topic without becoming tasteless, since the cartoonist's goal is to communicate ideas, not just to amuse the reader. The most amazing part of this experience is what others read into my cartoons; they find humor in things I did not anticipate or, worse, they miss what I meant to be most obvious. Unlike my academic papers, my cartoons often do distort ordinary perceptions by violating some kind of cliché and looking at something familiar in an off-kilter way. To do this while remaining sensitive to an extraordinarily eclectic and critical readership can be quite a challenge.



TEACHER'S CORNER: ZOO LABS

by Alison S. Brooks



Lab 1: Locomotion

1. Walk by at least 8 cages with *different* primates and record what the most active animal in the cage is doing as you walk by—for example, sitting, grooming, sleeping, brachiating (hanging from branches and swinging arm to arm), knuckle or fist walking, hanging by the tail and one leg, slow quadrupedal climbing or leaping (indicate whether quadrupedal running like a cat or vertical clinging and leaping where animals push off with hind limbs, twist in mid-air, and land on hind limbs). Record the name of the primate and the locomotion pattern.

2. For 3 primates **who were moving**, describe how the method of locomotion you observed is related to the animals' anatomy. What physical features help the animals move, such as tail form, location of special friction skin (like skin on our palm), form of nails, long legs or ankles, long arms, grasping or flat feet, bare knuckles, long curved fingers, curved spine, deep chest, etc.)

3. Select any active adult primate to observe for 15 minutes. Then observe an infant primate (of the same species) for 15 minutes. Estimate about how much of the time is spent in each of the different locomotor activities—walking on all fours, walking or standing on two legs, brachiating, jumping from hindlimbs and landing on forelimbs, jumping from hindlimbs and landing on hindlimbs. Discuss the similarities and differences between the adult and infant's movement.

Lab 2: Communication

Types of Communication Acts to Observe (the numbers and letters will be used as explained below):

I. *Olfactory*: taste and smell

- a. smelling of one animal by another
- b. smelling of other object and/or eating object and then same thing done by second animal
- c. "marking"—urinating, licking, or rubbing a

part of the body against part of the environment which is then smelled by another animal

II. *Tactile*:

- a. grooming
- b. hand clasping or arm embrace
- c. kissing
- d. nipping
- e. wrestling, rolling together
- f. touching another animal

III. *Visual*:

- a. postures—rigid, relaxed
- b. gestures—*aggressive*: raised eyebrows or open mouth display threatening; "rushes," shaking stick, slapping ground or cage *appeasement*: bowing to ground; presenting hand, face, or hindquarters; holding up one hand.
- c. facial expressions—*aggressive*: stares, eye brow raises, yawns or canine displays; *appeasement* grins
- d. chasing
- e. use of hands to signal communication

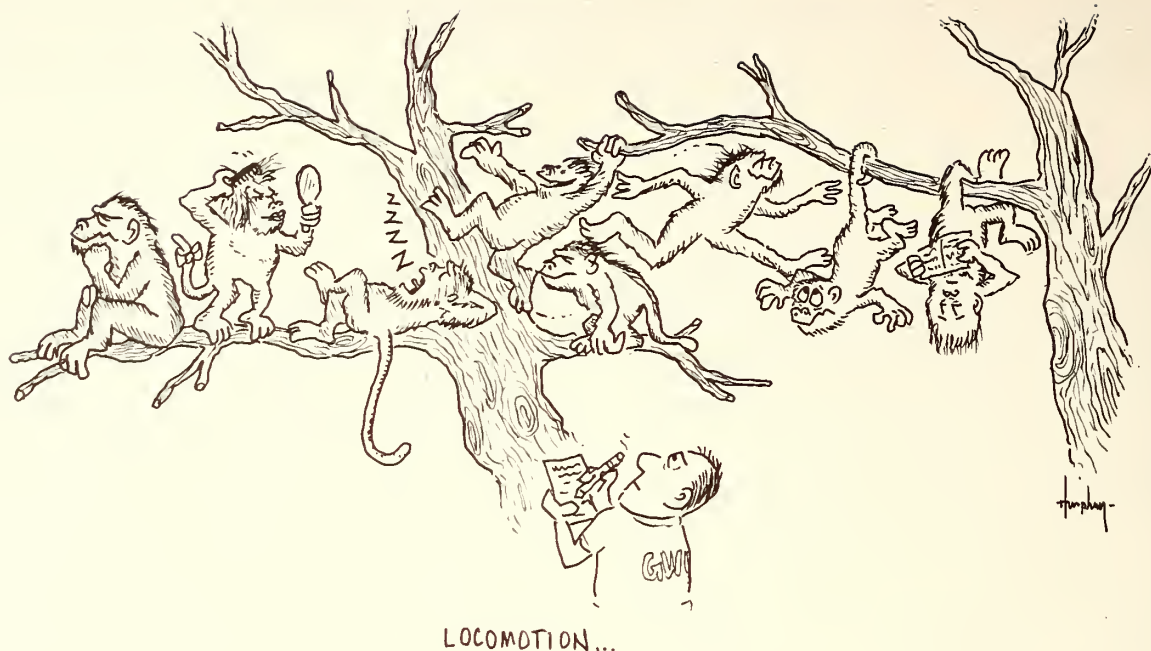
IV. *Vocal-auditory*:

- a. speaking
- b. listening
- c. shouting
- d. laughing
- e. hooting or calling—series of similar noises mostly vowels
- f. chattering—series of similar noises mostly consonants

How to Attack Problems:

1. Choose a group of animals which interests you. Don't worry too much about being able to "hear" voices, there is plenty of silent communication to watch.

2. Watch the group for 10 minutes learning to identify animals and "logical" behavior sequences. (you may want to assign names to animals).



3. Begin to take notes—try to take notes either in terms of behavior sequences or time intervals (make separate notebook entry for each one or two minute period).

Example (note assignment of letters and numbers to communication acts):

- a. A swings over to B who looks up (IIIc) They wrestle (IIe)
- b. B bites at A (IIId)

4. Watch for 20 minutes. Afterwards add communication numbers and letters to the descriptions.

5. Do a similar observation on a human group.

6. Summarize the communicative acts for both nonhuman primate group and human group.

7. Try to summarize your observations and findings—what are the most common communication acts, which animals communicate the most, how do nonhuman primates differ in communication acts from humans?

Lab 3: Mother-Infant Interaction

The relationship of the infant primate to other animals of its own species has been the subject of considerable experimentation and observation, both in captivity and in the wild. This lab involves a quantitative

study of these relationships and an attempt to see patterns of interaction and socialization in a group of caged primates.

1. Observe any two different groups with infants for 20 minutes each. Record in detailed notes the behavior of the infant and those with whom it interacts over this time. Take notes particularly on:

- a. Number of times infant contacts other animals (specify mother, adult, male, juvenile, etc.)
- b. Number of times infant breaks contact with other animals.
- c. Number of times other animal contacts infant.
- d. Number of times other animal breaks contact with infant. Describe the general nature of the contact in each instance. Also note if the infant is threatened or approached by other animals. Note which animals the infant has the most interaction with.

2. For each species, estimate the percentage of time spent by the infant in various activities, such as grooming, eating, playing, cuddling, sitting, etc.

3. Write a brief summary comparing the interactions of infants in the two groups.

Lab 4: General Behavior

1. Watch any group of three or more primates for 30 minutes. Try to assign a name to each animal observed, and if possible, note the animal's sex and approximate age. If your group has more than four animals in it, choose one or two animals to focus upon during your observation.

2. Describe how each animal is physically different from the others.

3. After 5 minutes of observation, begin to take careful notes on what is happening in the group. Try to identify "behavior sequences"—a series of interactions or behaviors which seem to begin and end. What happens during each sequence, who is involved, how long does the behavior last?

4. Note what the animals are doing, what expressions and communication acts are involved, which animals are interacting most intensely.

5. Look for differences in behavior among the adult males, adult females, infants, and juveniles.

6. Try to summarize the group's behavior during the time you observed. Can you make any "educated guesses" about the dynamics of the group you were observing—i.e., which animals are related; which animals prefer to interact with one another; which animals are older, younger; which are dominant or submissive?

Lab 5: Dominance/Submissive Behavior

Describe dominance/submissive behavior in a group of caged primates and discern the rank order (if any) of individuals in the group.

The following events or interactions are connected with dominance behavior in various species:

Approach-Retreat Interactions

1. Spatial supplanting of subordinate by dominant
2. Avoidance of dominant by subdominant
Aggressive actions on the part of one animal
3. Threats (e.g., stares, postural fixation, special vocalizations, etc.)
4. Displays (e.g., canine (yawn), tree shaking, chest beating, etc.)
5. Chasing

Approach-Approach Interactions

6. Presenting
7. Grooming
8. Mounting
- 9 Other submissive gestures (reach out a hand—chimps)
10. Control of desirable food (and females—though this is a more disputed concept which you probably won't be able to observe.)

Observe one group of animals housed together for 40 minutes. Make a chart with those 10 interactions across the top and the list of animals in the cage down one side. Note "dominance" interactions as they occur, under type of interaction and animals involved, e.g. under supplanting you might have a "d" for animal 4 and an "s" for animal 6, indicating that animal 4 spatially supplanted animal 6. Any given interaction may fall into more than one type: mark it under as many types as relevant but indicate that it is one behavior sequence (for instance, you might number interactions sequentially 1d-1s, 2d-2s, 3d-3s, etc.).

Rank animals in order of number of d's. Rank in order of number of s's. What do you perceive to be the rank order of the animals in this group? What kind of interaction is most closely correlated (by eye) with your rank order? Is the rank order of some animals (e.g., very young juveniles) improved by their association with a more dominant animal? Hand in notes and chart along with your conclusions. (Note: one problem you may find is that the most dominant animal may be avoided by others, resulting in little interaction.)

Classification of the Living Primates

ORDER: PRIMATES

SUBORDER: PROSIMII

FAMILY: Lemnridae (lemurs)

FAMILY: Indriidae (indris, sifakas)

FAMILY: Daubentoniidae (aye-aye)

FAMILY: Lorisidae (lorises, galagos, bush baby, potto)

FAMILY: Tarsiidae (tarsiers)

SUBORDER: ANTHROPOIDEA

INFRAORDER: PLATYRRHINI (New World)

SUPERFAMILY: CEBOIDEA

FAMILY: Calitrichidae (marmosets, tamarins)

FAMILY: Cebidae (squirrel, spider, howler, Capuchin monkeys)

INFRAORDER: CATARRHINI (Old World)

SUPERFAMILY: CERCOPITHECOIDEA

FAMILY: Cercopithecidae (monkeys)

SUBFAMILY: Cercopithecinae (baboon, macaque, guenon, mangabey)

SUBFAMILY: Colobinae (Colobus, lagurs)

SUPERFAMILY: HOMINOIDEA (apes, humans)

FAMILY: Hylobatidae (gibbons, siamangs)

FAMILY: Pongidae (orangutans)

FAMILY: Panidae (chimp, gorilla, bonobo)

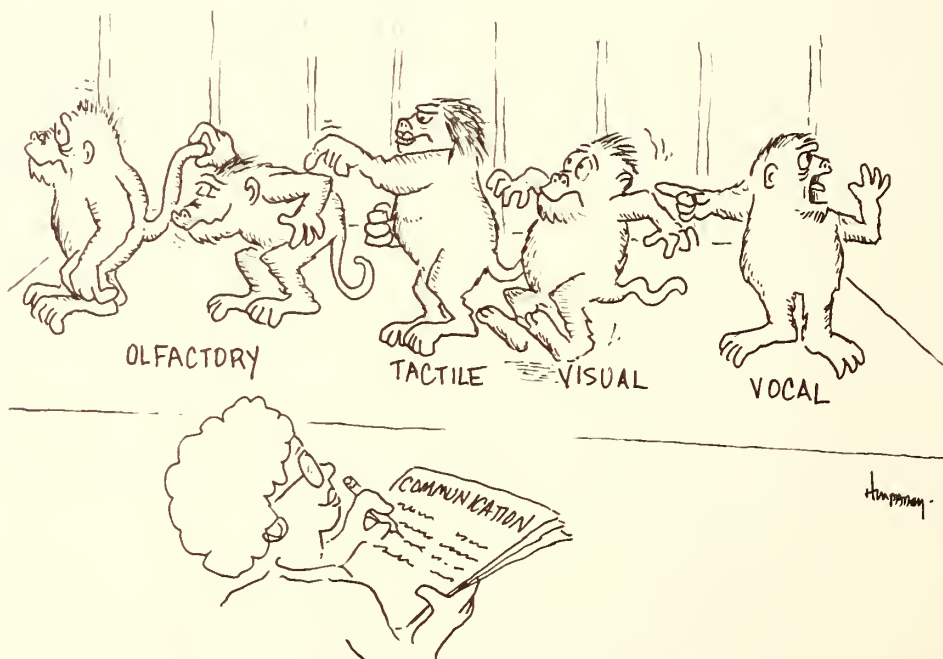
FAMILY: Hominidae (human)

[Editors' Note: All of the zoo labs were designed for observation of monkeys and apes at the National Zoological Park, Washington, D.C. These activities, written by Alison S. Brooks for classes at George Washington University, were tested by Carolyn Gecan, an anthropology teacher at Thomas Jefferson High School for Science and Technology in Fairfax, VA. These activities can be adapted for use in any zoological environment.]

References on Primates:

Napier, J.R. and P.H. Napier, 1985. *The Natural History of the Primates*. London: British Museum (Natural History).

Ciochan, R.L and R.A. Nisbett, eds., 1998. *The Primate Anthology: Essays on Primate Behavior, Ecology and Conservation from Natural History*. New Jersey: Prentice Hall (selections from *Natural History* magazine).



IN SEARCH OF AMERICA'S MIAs: FORENSIC ANTHROPOLOGY IN ACTION

by Robert W. Mann and Thomas D. Holland



[Editors' Note: At Arlington National Cemetery, the famous Tomb of the Unknown Soldier holds the remains of unidentified soldiers from each of our major wars—in honor of all the United States soldiers either missing in action or whose remains are still unidentified. On February 5, 1998, the *Washington Post* reported the possible future exhumation of a coffin from the Tomb of the Unknown Soldier for a mitochondrial DNA test, a relatively new test that can establish identification through genetic markers in the maternal line (Chip Crews. "A Name for the Unknown." *Style* Section B pp. 1&4). Jean Blassie, whose blood would be used for the testing, hopes to finally establish the answer she has sought for 26 years: what happened to the remains of her son after his A-37 attack plane went down on May 11, 1972 near An Lọc, 60 miles north of Saigon. What is known is that the following October South Vietnamese troops found six bones—four ribs, a pelvis, and a humerus—and 2 ID cards belonging to 24 year old Air Force 1st Lt. Michael J. Blassie. The bones were shipped from Saigon to the Central Identification Laboratory (CIL) in Hawaii, and from there eventually to the Tomb of the Unknown Soldier. The case has a bit of the "unsolved" mystery to it and reminds us once again of the importance of forensic science in the everyday lives of ordinary citizens of this country. In the article that follows, one of the forensic physical anthropologists from the CIL-Hawaii describes the important work that goes on year in and year out in this largely unknown facility, as teams of specialists work to recover, repatriate, and establish definite identifications for American service members (POWs/MIAs) lost in all past wars.]

Introduction

What do Jeffrey Dahmer, the Branch-Davidian Standoff, the crash of Korean Airlines Flight 801, War of 1812, Operation Desert Storm, and thousands of American soldiers listed as missing in action (MIA) share in common?

Few people are aware that forensic anthropologists assisted with each of these cases and continue to serve in many emergency response and mass disaster teams as well as acting as consultants to a variety of medical and legal agencies in the U.S. and abroad. Forensic anthropologists apply their skills to some unusual and difficult cases, including the finding,

recovering, and identifying American POWs/MIAs by the only laboratory of its kind—the U.S. Army Central Identification Laboratory, Hawaii (CILHI).

The role of forensic anthropology historically has been to assist medicolegal agencies—medical examiners, police, and the FBI—in the identification of recent homicides. From an examination of skeletonized remains, forensic anthropologists first distinguish whether they are animal or human. If the latter, they then ascertain biological age at death, time elapsed since death, sex, race, stature, and method of death (e.g., shooting). Forensic anthropologists must have specialized training in radiology, anatomy, dentistry, and forensic pathology in order to complete their objectives. The awareness of unique skeletal and dental features also helps them establish a positive personal identification.

Background

Although most forensic anthropologists are affiliated either with a university or research facility (e.g., Smithsonian Institution), fifteen are employed by the Department of the Army at the CILHI. Located adjacent to Pearl Harbor on Hickam Air Force Base, Oahu, the laboratory has, in addition to its anthropologists, two forensic dentists, and more than 150 soldiers and civilian support staff. The CILHI grew out of the Vietnam War and CIL-THAI (Thailand); it moved to its present location in Hawaii in 1991. This world class laboratory has the largest staff of forensic anthropologists in the United States and is responsible for the worldwide recovery, repatriation, and identification of American service members (POWs/MIAs) from all past wars. At present there are nearly 80,000 American MIAs from World War II, 8,100 from the Korean War, and 2,098 from the Vietnam War. Since 1973, the laboratory has been responsible for the identification of 738 unaccounted-for service members.

The search for POWs/MIAs is a very sensitive issue among many Americans who have lost children, spouses, and friends as part of the tragedies of war. Although these soldiers, sailors, airmen, and civilians were "lost" at war, they have not and never will be forgotten. The slogan of the American POW/MIA effort is "You are not forgotten."

Just as Americans long for the return of their loved ones, so do the people of other countries who also have missing friends and family members. The Vietnamese people, for example, have exceptionally strong, close family ties that are strained at the loss of a loved one. There are over 333,000 Vietnamese MIAs, most of whom will never be identified, even if found, because of the lack of Vietnamese medical and dental records from which to base a comparison, and subsequently, an identification. In addition, most Vietnamese soldiers were buried in large open fields or dense mountain jungles in unmarked or poorly marked graves, all signs of which in time will disappear.

In the Field

The CILHI has a dual role. First, it deploys 12-person teams of experts throughout the world to find and excavate graves and aircraft crash sites (for example, F-4 Phantoms and UH-1 Cobra helicopters). Second, it provides for the laboratory analysis and identification of American MIAs. A typical recovery team consists of an anthropologist, a military officer, a noncommissioned officer-in-charge (the "foreman"), an explosive ordnance disposal technician for disarming or removing bombs, a medic, interpreter, radio operator, photographer, and mortuary affairs specialist.

While most of the world's forensic anthropologists work from the relative comfort of a laboratory, those at the CILHI must travel to distant, and often remote, areas of the world in order to excavate and recover POW/MIA remains. In 1997, for example, the laboratory sent teams to Vietnam, Laos, China, North Korea, South America, the Pacific Islands, Russia, and Armenia. The terrain in these countries varies from ice-laden to tropical rain forests, and the hazards include malaria, snakes, scorpions, spiders, unexploded ordnance (bombs and mines), and precarious mountains. Housing conditions "in the field"

also vary from hotels and guest houses in the larger cities to sharing an 8-person tent in the jungles of such inhospitable places as Laos and Cambodia for 30 to 45 days. The team must carry everything necessary to be self sufficient throughout the mission including excavation equipment, electrical generators, fuel, tents, food, cooking supplies, medicine, and hundreds of boxes of bottled water—all trucked or flown in by helicopters. It is a physically and mentally demanding job that requires dedication, professionalism, and stamina.

Although the teams excavate isolated graves, the majority of excavations currently undertaken by the CILHI are air crashes in Southeast Asia, many of which were lost over the infamous Ho Chi Minh Trail. This "trail" actually consists of a vast network of footpaths, tunnels, and dirt roads that served as a clandestine supply and personnel pipeline connecting North and South Vietnam during the war. The difficulty for the excavation/recovery teams, however, is that by the time they reach a crash site there is little remaining of the aircraft. Many environmental and cultural (i.e., human intervention) variables, over a period of 20 or 30 years, result in the decay and loss of remains, personal effects, and aircraft wreckage.

One such case is an F-4 Phantom jet that crashed in Quang Binh, Central Vietnam in 1969. While searching for the site, a witness told one of the authors that as soon as the airplane stopped burning, he and many other villagers rushed to the crash site and scavenged wreckage for useable parts. Using only their bare hands, they bent and snapped aluminum from the fuselage, cut electrical wiring with machetes, and used a blow torch to cut thick metal rods into useable items. Everything that could be scavenged from the site was either carried back to the village and used around the home or sold to the nearest scrap dealer. This and other crash sites serve as a sort of "hardware store" where villagers living in remote areas obtain items and materials otherwise unavailable. Examples of the creative use of wreckage include rice-house rat guards and boats from fuselage aluminum, smoking pipes from hydraulic fittings, knives and machetes from propeller blades, rubber Ho Chi Minh sandals cut from aircraft tires, and fence posts, flower pots,

and pig troughs from aerial-dispensed cluster bomb units resembling four-foot long canoes.

In forensic anthropology, the physical relationship of one item to another (i.e., its context) and whether the objects are on the ground or buried, are important in reconstructing what amounts to a police crime scene. Legally, forensic anthropologists and dentists deal in evidence. Unfortunately for U.S. recovery teams, villagers who remove aircraft wreckage from a site remove the very evidence that U.S. teams need to identify aircraft. For example, aircraft engines and many electronic components have serialized data plates unique to each aircraft. Finding one serialized data plate or identification tag ("dog tag") can turn an otherwise unidentifiable jumble of wreckage into an identifiable aircraft. Incredibly, excavation teams working in Southeast Asia often recover only 100 to 150 pounds of twisted wreckage from a 28,000 pound jet. The rest either disintegrated on impact or was destroyed as a result of secondary explosions, burning, or scavenging.

During the act of scavenging aircraft wreckage, villagers sometimes find personal effects such as "dog tags," wrist watches, wedding bands, and religious medallions. If found, these items are taken from a crash site and used or worn by villagers while others are sold, traded, or subsequently lost. What must be borne in mind is that a wedding band or medallion to a villager living high up in the mountains does not bear the same sentimental value or significance as it does to Westerners. To villagers an identifying "dog tag" can be fashioned into a useful implement such as a small knife or tweezers for removing facial hair, one Vietnamese form of shaving.

The basic excavation strategy at a crash site is to let the evidence "speak" for itself. Only when there is no more wreckage coming out of the ground does the team cease working at a crash or grave site.

By searching for life-support related equipment (parachutes, oxygen bottles and hoses, flight helmets, flight suits), the anthropologist and life-support technician may be able to account for the aircraft's occupants. Determining the number of occupants on board an aircraft when it crashed can be done based on duplicated or multiple life-support related gear. For example, a parachute harness has only two metallic "D" rings. If the aircraft that crashed was an F-4, it carries a maximum of two occupants. If three parachute "D" rings are recovered from among the wreckage, it is safe to say that two people were on board at the time of impact.

Even with the presence of three "D" rings, could one of the occupants have survived this F-4 crash? The answer to this question can only be answered after reviewing all of the evidence and carefully considering the "preponderance" of the evidence. The items recovered from the crash site must provide substantial and wholly consistent evidence that, not only was the occupant(s) on board at the time of impact, but that the crash was not survivable. An example of a non-survivable air crash using this F-4 jet included the following evidence that we excavated from the crash site: portions of the cockpit were found near engine components; pieces of a flight suit, helmet, and wrist watch were recovered among cockpit debris; two parachute "D" rings; a religious medallion, one tooth, and two bone fragments were found near the flight suit material. Few would doubt that the preponderance of the evidence is consistent with one person in the aircraft when it crashed. (In this scenario we knew that the second individual parachuted from the aircraft and was rescued within hours.)



In the Laboratory

At the end of each Joint Field Activity in Vietnam, all bones, teeth, and personal effects that were turned over by Vietnamese citizens or excavated by the six U.S. recovery

teams are received at the Vietnamese Institute of Forensic Medicine in Hanoi. Each set of remains—sometimes no more than a few dime-sized bone fragments—is hand-carried to the Institute in locked and sealed hard plastic cases by a Vietnamese official. Once at the Institute, the cases are opened during one of the regularly-scheduled Joint Field Reviews, which are attended by Vietnamese forensic specialists and a CILHI forensic anthropologist and forensic dentist. The task of the joint team is to conduct a preliminary examination to determine which of the remains may be American. All suspected American remains are repatriated to the CILHI for detailed forensic analysis. (Vietnamese remains are retained by Vietnamese officials for burial.) The remains are flown in a military C-141 airplane to the CILHI in flag-draped (American) containers for the identification phase.

At the CILHI, the remains are laid out in anatomical order on a foam-covered table, and a forensic dentist and anthropologist are assigned to the case. The two scientists work independently of one another in order not to bias their conclusions. The dentist focuses on the teeth and the anthropologist on the skeletal remains. The remains are inventoried and photographed and the teeth are x-rayed and compared to ante-mortem (before death) records, charts and x-rays. Dental x-rays provide the vast majority of identifications as the dental fillings and morphology provide unique individualizing features for basing a positive identification. Other methods of identification include mitochondrial DNA derived from bones and teeth, unique skeletal features such as a healed broken bone, and video superimposition made by overlaying an image of the skull on a facial photograph.

When the dentist and anthropologist have completed their work, their conclusions are put in writing and compared. The skeletal attributes derived by the anthropologist must be consistent with those of the individual identified by the dentist. In other words, if the suggested identity provided by the dentist is a 22-year-old white male, with a living stature of 5' 11," then the anthropological indicators must be in agree-

ment. If the anthropologist determines that the bones are those of a 30 to 35-year-old black male with a height of 5' 5," there is a problem. One possibility for the conflicting data is that the bones are from one person and the teeth from another (i.e., co-mingled remains). Once this portion of the examination process is completed, the reports are compiled and submitted for inside peer review by other CILHI scientists.

The next step is to submit the recommended identification to the CILHI Laboratory Director, the CILHI Commander, and to three laboratory consultants for outside review of scientific integrity and accuracy of interpretation. The reports then are sent to the Casualty of Memorial Affairs Office in Alexandria, Virginia, the appropriate Office of Mortuary Affairs in Washington, DC who presents the case to the family, and finally to the Armed Forces Identification Review Board. If the family disagrees with the suggested identification, they have the right to hire their own consultant who will review the laboratory's findings, examine the remains, and draw his/her own conclusions. If the family's consultant disagrees with the recommended identification, the entire case may be sent back to the original anthropologist and dentist for a second go-round. In all, the process is quite difficult and there are many checks and balances to ensure that each case is handled accurately and in accordance with strict scientific procedures. Once the family agrees to the recommended identification, which most commonly happens, the remains are forwarded to them for burial at the government's expense.

While finding, recovering, and identifying American POWs/MIAs is as costly as well as a physically and mentally demanding job, the POW/MIA issue deserves our fullest attention and unwavering efforts. America's POWs/MIAs truly are not forgotten.

Robert W. Mann is Senior Anthropologist and Thomas D. Holland is Scientific Director of the U.S. Army Central Identification Laboratory, Hickam AFB, Hawaii (CILHI).

HIGH SCHOOL MARITIME ARCHAEOLOGY PROGRAM

by JoAnne Lanouette



Starting in 1991, Xavier High School in Chuuk, one of the states in the Federated States of Micronesia between Hawaii and the Philippines, began offering scuba diving and other marine-related programs. In 1992, a marine science and oceanography course was added followed in 1994 with a maritime history and archaeology program organized and taught by Clark Graham, president of the Society for Historic Investigation and Preservation (SHIP) and an environmentalist. This led to the first maritime archaeology field survey in 1995 of a submerged Japanese aircraft from World War II. Operation Hailstorm, a two day attack by the U.S. Navy on the Japanese Imperial Fleet, successfully damaged most of the Japanese air fighters and sunk numerous Japanese cargo ships along with aircraft. In the last few years, high school maritime archaeology groups have worked on a Nakajima C6N Saiun, a night fighter/reconnaissance aircraft, a Mitsubishi A6M model 52, a Nakajima B6N Tenzan, and historical war sites including airfields.

The survey of the Nakajima B6N Tenzan included conducting a marine survey of the submerged site and nearby reef, the latter made possible through the efforts of Kenneth Yong, marine biology instructor.

This year students are studying two traditional subjects. One group is surveying stone fish traps (maai), while the second is conducting an intensive above-ground survey of an ancient petroglyph site. In addition, under the direction of Kenneth Yong, students are carrying out a marine survey and water quality studies of the archaeological sites.

SHIP and Xavier High School believe that these projects are not only educational but also make a significant contribution to Micronesia's historic record.

Just as important is the firm conviction that Micronesians can and should study and document their historic and marine sites. Students at Xavier have concluded that "Our work can serve as an example to the people of Micronesia that they can do what people from other countries do." Furthermore, since these sites are located in their oceans and on their islands, the students and teachers believe it is better if Micronesians are involved in the study of their own homeland.

Thanks to the Internet, these innovative teachers and students from Micronesia found the *AnthroNotes* editors at the Smithsonian. We encourage our readers to contact this combined archaeology and marine science program at Xavier High School or the Society for Historic Investigation and Preservation at: SHIP, P.O. Box 1072, Chuuk, FM 96942; e-mail: cgraham@mail.fm.



ANTHROPOLOGY EXPLORED: *The Best of Smithsonian AnthroNotes*

CONTENTS

FOREWORD *David W. McCurdy*

THE ART OF ANTHROPOLOGY: A Note from the
Artist *Robert L. Humphrey*

ACKNOWLEDGMENTS *Ruth Osterweis Selig*

INTRODUCTION: Investigating the Origins, Nature,
and Cultures of Humankind *Ruth Osterweis Selig*

HUMAN ORIGINS

- 1 "APE-ING" LANGUAGE: Experiments and Communication with Our Closest Relatives
Kathleen D. Gordon
- 2 POLITICS AND PROBLEMS OF GORILLA AND CHIMP CONSERVATION
Alison S. Brooks, J.N. Leith Smith, and Catherine Cockshutt Smith
- 3 WHAT'S NEW IN EARLY HUMAN EVOLUTION 5 TO 1 MILLION YEARS AGO?
Alison S. Brooks
- 4 MODERN HUMAN ORIGINS: What's New with What's Old? *Alison S. Brooks*
- 5 MAN THE SCAVENGER *Kathleen D. Gordon*
- 6 THE REAL FLINTSTONES? What Are Artists' Depictions of Human Ancestors Telling Us?
Diane Gifford-Gonzalez
- 7 WHAT BONES TEACH US *Kathleen D. Gordon*
- 8 DISEASE IN HUMAN EVOLUTION: The Reemergence of Infectious Disease in the Third Epidemiological Transition *George J. Armelagos, Kathleen C. Barnes, and James Lin*

ARCHAEOLOGISTS EXAMINE THE PAST

- 9 HISTORY, PROGRESS, AND THE FACTS OF ANCIENT LIFE *Mark N. Cohen*
- 10 NEW PERSPECTIVES ON AGRICULTURAL ORIGINS IN THE ANCIENT NEAR EAST
Melinda A. Zeder
- 11 PYGMIES OF THE ITURI: An Ethnoarchaeological Exploration *John W. Fisher Jr.*
- 12 WHO GOT TO AMERICA FIRST? A Very Old Question *Stephen Williams*
- 13 BONES AND STONES—OR SHEEP?
Ruth Osterweis Selig with Update by Dennis J. Stanford

- 14 THE FIRST SOUTH AMERICANS: Archaeology at Monte Verde *Tom D. Dillehay*
- 15 THE MOCHE: Profile of an Ancient Peruvian People *John W. Verano*
- 16 A QUIET REVOLUTION: Origins of Agriculture in Eastern North America
Ruth Osterweis Selig with Update by Bruce D. Smith
- 17 GLOBAL CULTURE CHANGE: New Views of Circumpolar Lands and Peoples
William W. Fitzhugh
- 18 THE ARCHEOLOGY OF AFRICAN AMERICAN LIFE *Theresa A. Singleton*

OUR MANY CULTURES

- 19 IDENTITY TRANSFORMATION IN COLONIAL NORTHERN MEXICO
William L. Merrill
- 20 ANDEAN WOMEN: United We Sit
Catherine J. Allen
- 21 WHOSE PAST IS IT ANYWAY? Three Interpretations of History *Loretta Fowler*
- 22 DOING ETHNOGRAPHY AT MACALESTER COLLEGE: "From the Inside out"
Ruth Osterweis Selig
- 23 ANOTHER MAASAI STORY *Naomi Kipury*
- 24 MAYAN INDIANS AND THE PASSAMAQUODDY OF MAINE: Anthropological Linguists Aid in Cultural Survival
Robert M. Laughlin and Kathleen J. Bragdon
- 25 MEDICINE, LAW, AND EDUCATION: A Journey into Applied Linguistics
P. Ann Kaupp with Update by Roger W. Shuy
- 26 ANTHROPOLOGICAL PERSPECTIVES ON AGING *Alison S. Brooks and Patricia Draper*
- 27 ETHNOGRAPHIC FILM: Then and Now
John P. Homiak
- 28 150 YEARS OF NATIVE AMERICAN RESEARCH AT THE SMITHSONIAN
JoAllyn Archambault and William C. Sturtevant
- 29 RACE AND ETHNICITY IN AMERICA
Alison S. Brooks, Fatimah L.C. Jackson, and R. Richard Grinker

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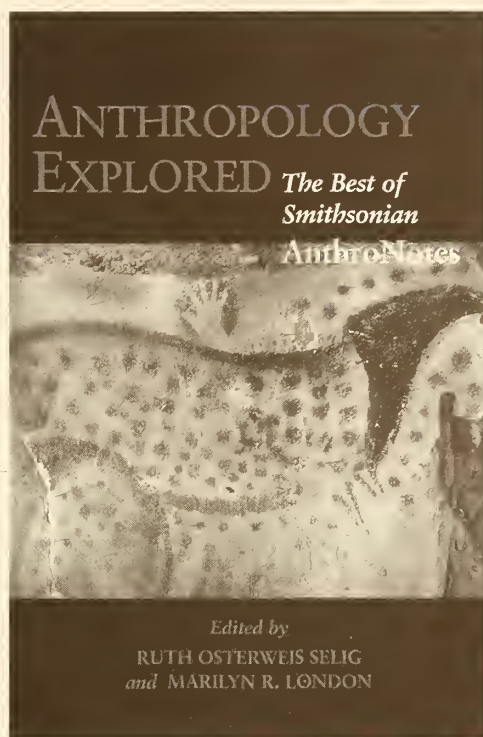
The *AnthroNotes* editors (P. Ann Kaupp, Ruth O. Selig, Alison S. Brooks, and JoAnne Lanouette) proudly announce the publication of the long-awaited, much anticipated *AnthroNotes* book:

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ANTHRONOTES has a three part mission:

1. To more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
2. To help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of curriculum subjects; and
3. To create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

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CULTURAL RELATIVISM AND UNIVERSAL HUMAN RIGHTS

by Carolyn Fluehr-Lobban

♦ ♦ ♦

[Editors' Note: December 1998 marks the 50th anniversary of the Universal Declaration of Human Rights. On December 11th, *The Washington Post* (p. A52) reported President Clinton's public announcement of a Genocide Early Warning Center as well as a new interagency group to monitor U.S. compliance with human rights treaties; new Immigration and Naturalization Service guidelines to make it easier for children to file political asylum claims; and increased funding to organizations that treat torture victims. At the ceremony, Mrs. Clinton spoke out against the treatment of women in Afghanistan who are not allowed to work or attend school. "We must all make it unmistakably clear this terrible suffering inflicted on the women and girls of Afghanistan is not cultural, it is 'criminal'."]

Today, cultural relativism is experiencing a period of critical self-examination within the field of anthropology.

Cultural relativism asserts that since each culture has its own inherent integrity with unique values and practices, value judgments should be withheld or suspended until cultural context is taken into account. What members of one culture might view as strange and bizarre in another culture (for example, polygamy, body tattooing, or strict dietary laws) can be understood best within that culture's context. Theoretically, anthropologists always should be observers and recorders not evaluators of other peoples' customs and values.

While some anthropologists would still agree with this view, others, both inside the field and outside, especially in the arena of human rights, are challenging this concept.

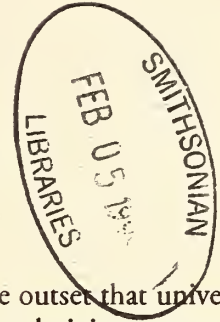
It is important to state at the outset that universal human rights and cultural relativism are not philosophically or morally opposed to one another. The terrain between them is fluid and rich.

Anthropology's Role in Human Rights

Historically, anthropology as a discipline declined to participate in the international dialogues that produced conventions regarding human rights, mainly due to philosophical constraints stemming from cultural relativism. This meant that anthropology's voice was not included in the drafting of human rights statements such as the United Nation's "Conventions for the Elimination of All Forms of Discrimination Against Women" (1979) or the "Rights of the Child" (1989).

The world has changed since the Executive Board of the American Anthropological Association decided in 1947 not to participate in the discussions that produced the Universal Declaration of Human Rights (1948), used subsequently as a foundation for opposition to authoritarian and politically repressive regimes. Since then some anthropologists have been active in cultural survival and human rights of threatened groups.

As I explained in my article in *The Chronicle of Higher Education*, anthropologists "are in a unique position to lend knowledge and expertise to the international debate regarding human rights." And, in fact, anthropologists have spoken out against reprehensible practices such as genocide. They have testified in U.S. courts against government rules that impinge on the religious traditions or sacred lands of Native Americans. But there are other



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human rights issues, from domestic abuse to female circumcision to culturally based forms of homicide, about which anthropologists have remained silent. Thus, anthropologists have not built up accumulated experience in the area of human rights informed by cultural relativist considerations (1995:B1-2).

This article is an attempt to lay out some of the basic issues and considerations in this arena, looking at the intersection of cultural relativism and the human rights issues that have gained more public awareness than ever before.

The Limits of Cultural Relativism

Cultural relativism may be taken to extremes. Some argue that since cultures vary and each culture has its own unique moral system, we cannot make judgments about 'right' and 'wrong' in comparing one culture to another. Thus, one cannot reject any form of culturally acceptable homicide—for example, infanticide, senilicide, or 'honor' killing of women in Mediterranean and Middle East societies for alleged sexual misconduct—on moral grounds because cultural acceptance or condemnation are equally valid. This extreme relativist position is actually a form of absolutism with which few anthropologists would agree. Anthropologists did not defend Nazi genocide or South African apartheid with cultural relativist arguments, and many have been critical of relativist defenses especially of Western practices they see as harmful, such as cultural institutions emphasizing violence.

The truth about our complex world of cultural difference is that moral perplexity abounds. The ability to accept that another person's or culture's position with which one disagrees is nevertheless rational or intelligible lays the basis for discussion of differences.

Relativism can be used as a way of living in society with others. An egalitarian relativist sees all human beings as moral agents with equal potential for making ethical judgments. Though moral judgments in and of themselves are not scientific, they can be socially analyzed. That is, relativism and universalism in cultural values or practices (including international standards of human rights) need not be opposed morally, but they can be discussed, debated, and assessed by the social sciences, including anthropology.

Relativist Challenge to Universal Rights: Islamic Societies and the West

In the conflict between cultural relativism and universal rights, one area where there is a seeming clash between cultures and a war of words is where the West meets the Islamic world. The highly politicized context of this oppositional discourse and occasional real warfare reminds us of another kind of cold war between the U.S. and the Soviet Union. The subjective perceptions of morality and immorality, of right and wrong, on both sides can be so powerful that objective discourse and cultural negotiation may seem impossible.

Islamic governments from Iran to Afghanistan to Sudan have claimed cultural and religious immunity from international human rights standards. For example, the perceived Islamic responsibility to protect women by restricting their activities has been asserted in defense of public morality. This stand has been criticized in the context of Western human rights and feminism. Islamic philosophers and political activists may deny that a woman can be a head of a family or a head of state. Their position violates international standards of women's rights and human rights, particularly as outlined in the United Nations 1979 "Convention on the Elimination of all Forms of Discrimination Against Women." Muslims in several states, however, have disregarded the advice of these religious figures when they made Benazir Bhutto Prime Minister of the Islamic Republic of Pakistan and Tansu Cillar and Sheikha Hassina the respective heads of state in Turkey and Bangladesh. Western nations actually have proportionately fewer female heads of state and may be accused of hypocrisy in their finger pointing at the Islamic world.

During the Fourth World Conference on Women held in Beijing in 1995, positions on women's rights expressed by some Muslim activists diverged from the majority feminist view. Debates over sexual and reproductive health and over sexual orientation as universal rights of women met with opposition not only from Muslim nations, like Iran and Egypt, but also from the Vatican and other Catholic representatives at the conference. In the end, disagreements were aired that proved not to be destructive and there was frank acknowledgment that reasonable persons (and by extension, cultures) could disagree. This is a relativist solution to different views about "universal rights" of women. But consensus was achieved on a host of other

issues, including: 1) opposing all forms of violence against women, 2) opposing female genital mutilation, and 3) identifying rape during armed conflict as a war crime, and, in certain cases, a crime against humanity. Relativism expressed with respect to the religious sentiments of some delegates eased the negotiated terrain and permitted dialogue that achieved consensus on many other points while allowing reasonable difference to be asserted on other matters.

Universal Rights Challenge Relativism: Female Circumcision

One of the most culturally and emotionally charged battlegrounds where the cultural relativist confronts the advocate of universal human rights is the issue of female circumcision or FGM (female genital mutilation)*. Female circumcision is the removal of all or part of the clitoris and/or labia. The issue of female circumcision has set Western feminism against African cultural traditions and Islam, and has pitted Muslim against Muslim and African against African. Despite female circumcision's prevalence in African Islamic societies, it is also found in some non-Islamic, African contexts and is rare in Islamic contexts outside Africa. There is no consensus among Muslim scholars or among African Muslims about whether female circumcision is mandated by religion. Religious interpretation in the Sudan as early as 1939 determined that female circumcision is only "desirable" (manduh), and not compulsory (Fluehr-Lobban, 1987: 96), while in 1994 the late Grand Sheikh of Al-Azhar Islamic University in Cairo, Gad al-Haq Ali Gad al-Haq, called female circumcision "a noble practice which does honor to women." His chief rival, the Grand Mufti of the Egyptian Republic, said that female circumcision is not part of Islamic teaching and is a matter best evaluated by medical professionals (*Philadelphia Inquirer*, April 13, 1995, section A-3).

I have previously written about confronting my own personal struggle between cultural relativism and universal rights regarding female circumcision in the Sudan (Fluehr-Lobban, 1995):

For nearly 25 years, I have conducted research in the Sudan, one of the African countries where the practice of female circumcision is widespread, affecting the vast majority of females in the northern Sudan. Chronic infections are a common result, and sexual intercourse and childbirth are rendered difficult and painful. However, cultural ideology in

the Sudan holds that an uncircumcised woman is not respectable, and few families would risk their daughter's chances of marrying by not having her circumcised. British colonial officials outlawed the practice in 1946, but this served only to make it surreptitious and thus more dangerous. Women found it harder to get treatment for mistakes or for side effects of the illegal surgery.

For a long time I felt trapped between my anthropological understanding of the custom and of the sensitivities about it among the people with whom I was working, on the one side, and the largely feminist campaign in the West to eradicate what critics sees as a "barbaric" custom, on the other hand. To ally myself with Western feminists and condemn female circumcision seemed to me a betrayal of the value system and culture of the Sudan which I had come to understand. But as I was asked over the years to comment on female circumcision because of my expertise in the Sudan, I came to realize how deeply I felt that the practice was harmful and wrong. In 1993, female circumcision was one of the practices deemed harmful by delegates at the International Human Rights Conference in Vienna. During their discussions, they came to view circumcision as a violation of the rights of children as well as of the women who suffer its consequences throughout life. Those discussions made me realize that there was a moral agenda larger than myself, larger than Western



culture or the culture of the northern Sudan, or of my discipline. I decided to join colleagues from other disciplines and cultures in speaking out against the practice.

The Anthropologists' Dilemma

The sense of paralysis that kept me from directly opposing female circumcision (FGM) for decades was largely attributable to my anthropological training grounded in cultural relativism. From a fieldworker's standpoint, my neutralist position stemmed from the anthropologist's first hand knowledge of the local sensitivities about the practice, along with the fact that dialogue was actively underway in the Sudan leading in the direction of changes ameliorating the practice. While I would not hesitate to criticize breast implants or other Western surgical adjustments of the female body, I withheld judgment of female circumcision as though the moral considerations were fundamentally different. My socialization as an anthropology undergraduate and graduate student, along with years of anthropology teaching, conditioned a relativist reflex to almost any challenge to cultural practice on moral or philosophical grounds, especially ones that appeared to privilege the West. However, I realized that a double standard had crept into my teaching. For example, I would readily criticize rampant domestic violence in the U.S. and then attempt to rationalize the killing of wives and sisters from the Middle East to Latin America by men whose "honor" had been violated by their female relation's alleged misdeeds, from flirtation to adultery. Of course, cultural context is critical and the reading of cultural difference our stock-in-trade. One may lament the rising divorce rate and destruction of family life in the U.S. while applauding increasing rights for judicial divorce for Middle Eastern women. At times relativism may frame and enlighten the debate, but, in the end, moral judgment and human rights take precedence and choices must be made.

What changed my view away from the conditioned relativist response was the international, cross-cultural, interdisciplinary dialogue that placed female circumcision on a level of such harm that whatever social good it represents (in terms of sexual propriety and marriage norms), the harm to the more basic rights of women and girls outweighed the culturally understandable "good." Moreover, active feminist agitation against female circumcision within the Sudan

has fostered the kind of indigenous response that anthropologists like, so as not to appear to join the ranks of the Western feminists who had patronizingly tried to dictate the "correct" agenda to women most directly affected by the practice. Women's and human rights associations in the Ivory Coast and Egypt, as well as the Sudan, have also called for an end to female circumcision, while the Cairo Institute for Human Rights reported in 1995 the first publicly acknowledged marriage of an uncircumcised woman. In other words, a broad spectrum of the human community has come to an agreement that genital mutilation of girls and women is wrong.

The Changing U.S. Legal Context

Beyond these cultural and moral considerations is a changed legal environment in the U.S. and elsewhere. The granting of political asylum by the U.S. government in 1996 to Fauziya Kasinga, a Togolese woman who argued that her return to her country would result in the forcible circumcision of her daughter and thus violate her human rights, was a turning point. Prior to this decision, articles had appeared in American law journals arguing for the U.S. to follow the examples of France and Canada and "legally protect" women and girls at risk by criminalizing female circumcision and by extending political asylum. Authors also argued against the cultural relativist or traditionalist justification for female circumcision. Typical customary cultural arguments in defense of female circumcision include: it is a deeply rooted practice; it prevents promiscuity and promotes cleanliness and aesthetics; and it enhances fertility. Defenders of the practice, female and male, African and Western, inevitably invoke cultural relativism and ethnocentrism. Opponents argue that while the morality and values of a person are certainly shaped by the culture and history of a given society, this does not negate the philosophical theory that human rights, defined as the rights to which one is entitled simply by virtue of being human, are universal by definition. So, although human behavior is necessarily culturally relative, human rights are universal entitlements that are grounded in cross culturally recognized moral values. In response to the relativist argument, Rhoda Howard writes that the "argument that different societies have different concepts of rights is based on an assumption that confuses human rights with human dignity" (1986:17). Further, for non-anthropologists, especially moral philosophers and legal practitioners, evocation of relativist arguments as a 'defense' or excuse for violence,

injustice, or other social ills is patently offensive. "Cultural values and cultural practice are as legitimately subject to criticism from a human rights perspective as a structural aspect of a society. African 'culture' may not be used as a defense of human rights abuses" (Howard, 1986:16).

There is nothing particularly African, Sudanese or Nigerian about violence or injustice. This is true of violations of human rights whether they are in the form of arbitrary arrest, detention and torture inflicted by the state, or female circumcision imposed by custom. Moreover, many African progressives have taken an active role in evaluating the contemporary legitimacy and relevance of cultural practices arguing for the retention of useful traditions and the abandonment of practices that inflict harm or injury. Ethnic scarification has all but disappeared among peoples for whom this practice was routine only a few generations removed from the present day. And the fact that female circumcision is an ancient custom found in many diverse cultures does not legitimate its continued persistence (Lawrence, 1993:1944).

Beyond the standard of harm evoked in this argument, it is increasingly evident that attempts to justify the control of female sexuality—whether using aesthetics, cleanliness, respectability or religious ideology—increasingly are being questioned and rebuked in different cultures and cannot be sustained as a justification for the continuation of a harmful practice.

Anthropologists' Expert Testimony

I had the opportunity to offer expert testimony in an Immigration and Naturalization Service (INS) case involving application for asylum and withholding of

deportation for a Nigerian family. The case revolved around the issues of Muslim persecution of Christians and the fear of female circumcision for the two young daughters of the parents, the wife having already undergone circumcision. My testimony involved responding to questions about female circumcision from the attorney for the Nigerian family and the judge. I was examined and cross-examined especially on the issue of the probability that the girls would be circumcised in their home community in northern Nigeria even if the father and mother opposed this.

Interestingly, after the 1996 Kasinga case, the U.S. State Department issued guidelines to the INS and its courts suggesting that uncircumcised girls would not be at risk if their fathers opposed the practice. I explained that on the basis of my knowledge of the practice in a comparable African Muslim context, female circumcision is the province of female kin. There is no assurance, given the influence of extended family ties, that the girls would be protected on the strength of their parents, or just their father's, opposition. The matter of the state protecting the girls was moot given its lack of interest in regulating matters of "custom" and Nigeria's poor human rights record. Even in the Sudan, where female circumcision has been illegal since 1946, there has been little or no enforcement of the law. I was not asked if I believed that female circumcision is a violation of human rights, women's rights, or the rights of the child. At a subsequent hearing, the mother, who had been circumcised as a child, testified about her fears of her daughters' forcible circumcision or, if no circumcision were performed, of their inability to be

(Continued on page 16)



TEACHER RESOURCES

Teaching Materials:

◆ The Society for American Archaeology offers the following teaching materials: *Teaching Archaeology: A Sampler for Grades 3 to 12*; *Classroom Sources for Archaeology Education: A Resource Guide*; and *Guidelines for the Evaluation of Archaeology Education Materials*. Send \$5 for shipping and handling for one item; 50 cents for each additional item, to: Society for American Archaeology, 900 Second St., NE, #12, Washington, DC 20002-3557.

◆ Learn how seventh grade anthropology teacher Joan Brodsky-Schur engages her students in "fieldwork" in the classroom in "From Fiction to Field Notes: Observing Ibo Culture in *Things Fall Apart*" (*Social Education*, Nov/Dec 1997).

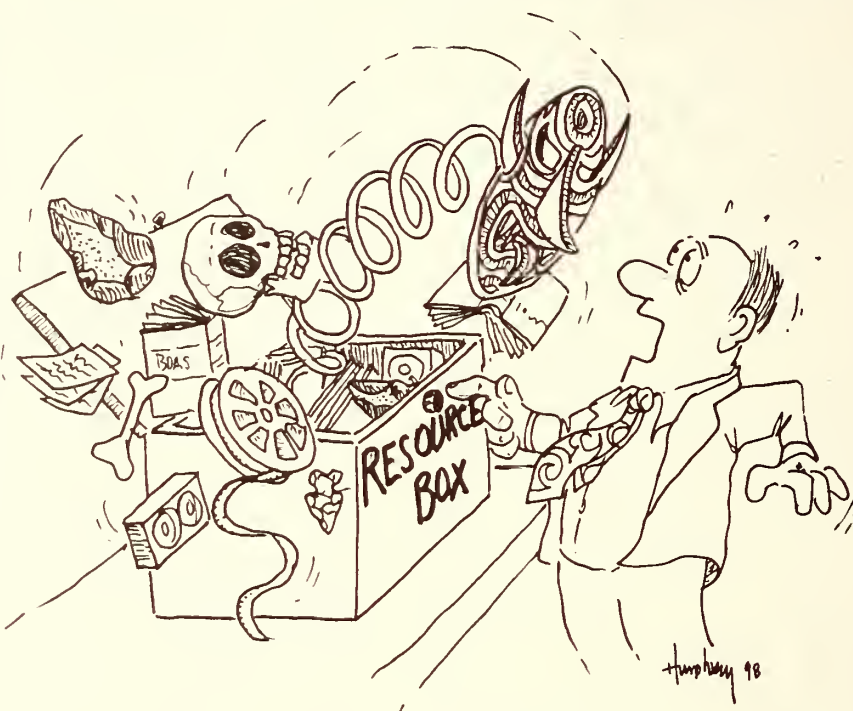
◆ "Educational Innovation: Learning from Households," a 32-page special issue of *Practicing Anthropology* (vol. 17, no. 3) edited by Norma González, describes five elementary teachers' experiences carrying out ethnographic research in their students' homes and communities and developing and implementing curriculum units based on their research. Copies are available for \$5 each (\$4 for orders of 10 or more). Order from the Society for Applied Anthropology Business Office, P.O. Box 24083, Oklahoma City, OK 73124. For Visa or MasterCard orders, call (405) 843-5113. Also check their website at www.telepath.com/sfaa.

◆ Cultural Survival's Curriculum Resource Program, in partnership with teachers, develops educational materials for grades 6-12 designed to raise awareness about indigenous peoples, ethnic minorities, and human rights. Available topics are Rain Forest People and Places, The Chiapas Mayas, and Aboriginal Australia. The materials

are self-contained and include maps, photos, and other classroom aids. These materials are available on the web at www.ca.org, or write, Cultural Survival, 96 Mount Auburn St., Cambridge, MA 02138; (617) 441-5400; email: csinc@cs.org.

◆ The AAA's Council for General Anthropology has three modules on physical anthropology for *college and senior high school students* (see the Fall 1997 issue of *AnthroNotes* for descriptions) and a new cultural anthropology module titled "Marriage and Kinship in (North) India" by Serena Nanda (John Jay College). This six-part module introduces students to Indian marriage

practices through classroom exercises, film, assigned reading material, and classroom discussions. Students can compare these practices with those in North America. Another module, "The Kin Game," similar to the television game Jeopardy, encourages students to talk



about their own kin. These free modules can be reproduced for classroom use and are available from Patricia Rice at the Department of Sociology and Anthropology, West Virginia University, Morgantown, WV 26506 or email: price@wvu.edu.

◆ "Teaching from Objects and Stories: Learning about the Bering Sea Eskimo People," published in *Smithsonian in Your Classroom* (January/February 1998), is free by writing to the Smithsonian Office of Education, A&I Bldg. 1163, MRC 402, Washington, DC 20560; fax: (202) 357-2116; www.educate.si.edu.

◆ Looking for classroom activities for Northwest Coast cultural traditions? Nan McNutt has produced activity books for ages 9-12 that have been reviewed and tested by tribal members and include artwork by Native

artists. *The Bentwood Box*, *The Button Blanket*, *The Cedar Plank Mask*, and *The Spindle Whorl*, published by Sasquatch Books in Seattle, WA, contain an illustrated story; activities and puzzles; a parent-teacher guide; and a full-color, pull-out insert with which children can make a paper model of the book's subject. Available for \$10.95 each at local bookstores or contact Nan McNutt directly for a 20% teacher discount. Write: Nan McNutt, 12722 39th Ave., N.E., Seattle, Washington 98125; or email her at nmcnutt@worldnet.att.net.

Publications:

♦ "Is it Race?" has been a recent theme of the American Anthropological Association's *Anthropology Newsletter* (1998-99). In over 70 articles, anthropologists discuss race and human diversity. The AAA is making these articles available for \$10, payable by Visa or check. Contact the AAA Membership Office on email: members@ameranthassn.org/ or by calling (703) 528-1902, ext. 9. The AAA Statement on Race, published in the September issue of the *Anthropology Newsletter*, is also available on the AAA web site: www.ameranthassn.org/ under "government relations." A new book on race, *Cultural Intolerance: Chauvinism, Class, and Racism in the United States* (Yale 1998), by Mark Nathan Cohen, received the Bruno Tolerance Book Award from the Simon Wiesenthal Center this fall.

♦ *Careers in Anthropology* by John T. Omohundro (Mountain View, CA: Mayfield Publishing Company, 1998) is a practical and informative workbook that explains what anthropology is, what anthropologists do, career opportunities (starting at the B.A. level), how to begin job hunting, and how to get hired. The book contains exercises to help you determine if a career in anthropology is for you.

♦ *Teaching Anthropology Newsletter* is a free publication that promotes the teaching of precollege anthropology. The Fall 1997/Spring 1998 issue mentions the National Association of Biology Teachers position statement on the teaching of evolution and World Wide Web sites teachers might wish to consult on the topic. To subscribe, write: TAN, Department of Anthropology, Saint Mary's University, Halifax, Nova Scotia B3H 3C3; mlewis@shark.stmarys.ca.

♦ Look for the May/June 1998 issue of *The Social Studies* that includes a "Special Section on Anthropology in the Classroom," with articles by Thomas Dynneson,

Ruth Selig (*AnthroNotes* editor), KC Smith, and Jane White.

♦ *Teaching About Evolution and the Nature of Science* (140 pp.) is a new publication of the National Academy of Sciences. Chapters include: Why Teach Evolution?, Major Themes in Evolution, Evolution and the Nature of Science, Evolution and the National Science Education Standards, Frequently Asked Questions, Activities for Teaching, and Selecting Instructional Materials. Available from the National Academy Press, 2101 Constitution Ave., N.W., Box 285, Washington, DC 20055; (800) 624-6242 or (202) 334-3313. Also available online at www.nap.edu/reading room/books/evolution98.

♦ *Teaching Anthropology: SACC Notes* (TASN), the publication of the Society for Anthropology in Community Colleges (SACC), a section of the American Anthropological Association, is published biannually. Precollege teachers are encouraged to subscribe to TASN, which reports on current issues in the five fields of anthropology, on new teaching resources, as well as on activities of SACC and on papers given at SACC's annual conferences. Non-members of SACC may subscribe to TASN by contacting the editor, Lloyd J. Miller, Des Moines Area Community College, 2006 South Ankeny Boulevard, Ankeny, Iowa 50021; (515) 964-6435; email: LJMIL@aol.com. To be added to SACC's list serve, email: pops@gwis.com. SACC members are available to assist teachers in curriculum planning for social studies courses, which usually employ anthropological topics and concepts.

♦ Check out *Anthropology Explored: The Best of Smithsonian AnthroNotes* as a possible classroom textbook/reader. See page 19 for ordering information. The book received a positive review by David Gellner in the *Times Literary Supplement* (London: Oct. 20, 1998, p. 32): "Many of the chapters on archaeology or evolution contain interesting updates, which give a sense of the progress of these kinds of anthropological study through conjecture and refutation.... The book provides a sense of a massive anthropological profession, secure in the use of basic concepts, largely unruffled by the deconstructive, postmodern concerns that are some of its elite members' most influential exports...." See Spring 1998 issue of *AnthroNotes* (page 19) for information on requesting an examination copy for classroom use.

TEACHER'S CORNER: EXPLORING HISTORIC CEMETERIES

by Ann Palkovich



In the Washington metropolitan area during the 16th, 17th, and early 18th centuries, as in most towns in the United States, "graveyards" were located in churchyards and usually near the center of town. However, overcrowding of graves and new sanitation laws mandated the closing of most of these early "graveyards" by the 1850s. The new cemeteries were located on the periphery of towns—distinct and separate from the focus of activity among the living. By the mid-19th century, a new genre of formal cemeteries was being established in America. (The Mount Auburn Cemetery in Cambridge, MA is one of the earliest examples of these new burial places.) Most existing cemeteries in the Washington metropolitan area were created during this time and are generally referred to as "rural cemeteries." What was this new genre?

The newly established 19th century "cemeteries" (replacing earlier terms such as "graveyards") were not simply a place to inter the dead but represented a new type of cultural institution. Cemeteries were now formally designed to resemble gardens. The dead were not simply interred but memorialized. New rules

defined such things as the proper care of the grounds and the appropriate attire and demeanor while visiting the cemetery.

The boundaries of most 19th century rural cemeteries are marked, for instance, by fences or shrubbery. Often a centrally located entrance leads to symmetrical paths or roadways that divide the cemetery into sections. These sections may be further divided into family plots or other areas (e.g. military graves). Planting may mark sections, plots or individual graves. Such features set off the individual graves as well as the entire cemetery, both physically and visually, from the surrounding area.

Nineteenth century cemeteries distinctly differ from earlier American graveyards. The differences are not limited to changes in gravestone styles, epitaphs, and symbols. Earlier graveyards express mortuary ideology and attitudes of death through individual graves. Rural cemeteries cannot simply be analyzed or understood as clusters of graves. Individual graves are an integral part of the overall cemetery "design." Interpretation of these



19th century cemeteries must, therefore, not only account for the variety among individual graves but also for the overriding common elements expressed in all such cemeteries.

Class Exercise

The exercise below focuses on historic cemeteries. These cemeteries provide historic archaeologists with an interesting opportunity to examine how artifacts (in this case gravestones) vary at different times and in different places. Such variations often reflect how a culture is changing, how cultures differ from one another, and how artifacts reflect these changes and differences. To understand differences in gravestones, archaeologists observe both the individual markers and the larger context or setting of these graves. In general, they ask how important are artifact patterns and the context of these patterns to archaeological interpretations.

Select a cemetery to study and answer the questions for each part of the exercise.

1. What is the name of this cemetery? Spend about 15 minutes just walking around the cemetery. Pay particular attention to fences, paths, paved drives, chapels and other buildings, plantings, and other features of the landscape. Identify the boundaries of the cemetery. Is it marked by a fence, sidewalk, shrubs, or in some other way?
2. Make a rough sketch map showing the location of the fences, paths, and other features you have identified. Note the earliest and most recent gravestones and sketch in their locations. Does the cemetery seem planned or are the graves located haphazardly?
3. Using a standard form (see below), record 20 gravestones. Try to find different styles of gravestones to record. Do you find certain gravestone styles in only some areas of the cemetery and not others? Are these styles associated with only certain time periods? What does this tell you about the size of the cemetery at different times and how gravestone styles changed over time?

In metropolitan Washington, the most common gravestone styles are tablets, obelisks, blocks, and slabs. Occurring in the late 18th century to the mid-19th century, tablets are single vertical stones that average two to four inches in thickness and are made of limestone, marble, or sandstone. These stones, often with a sculpted top, are placed directly in the ground with no bases used.

All the surfaces of these stones have been cut (or finished) but not polished.

Shaped like the Washington Monument, obelisks, usually made of marble, are tall and square in cross-section and dominate gravestones in the late 19th to early 20th century. The obelisk may be topped with an urn, ball (known as an orb), or other figure and may have one or several bases of varying sizes. While most gravestones are lettered only on the front, obelisks may show lettering on all sides.

Blocks, which are square gravestones, vary in size, may or may not have bases, and generally show cut but not polished surfaces. Made of a variety of different stones, these markers are characteristic of the 20th century. A variation of a block stone, the pulpit style marker has a slanted face on which is carved the individual's name, other information, and decoration. Made of marble or granite, pulpit stones rest on bases.

Slabs typify the 20th century and are still the most common gravestone used today. Slabs, often composed of granite, are usually placed vertically on a base and vary in thickness from six to eight inches. While the front of a slab is polished, the sides and sometimes the back are roughhewn.

Other gravestone styles may be noted as well—elaborate figurative sculptures, crude stones, or simple wooden crosses. Often greater numbers of unusual gravestones are found during transition periods from one general style (e.g., tablets) to another style (e.g., obelisks).

Initial studies of local 19th century cemeteries have yielded some unexpected results. The striking similarity among contemporaneous cemeteries representing distinct socioeconomic and religious groups proved the most surprising observation. Formally marked boundaries, landscaping, symmetrical paths, and, in particular, the style of grave markers and the stone from which they are carved create a uniform visual impression. Economic class or religious affiliation are not immediately apparent. This suggests that the accepted "rules" for rural cemeteries—that is, how the grave is to appear in the landscape and the elements which it must contain—superseded differences within society. Only when individual grave data are examined do differences in community and religious cemeteries become evident. Contrasts in epitaphs, religious

symbols, decorations, and the spatial arrangement of graves seem to be the ways in which class structure and religious affiliations are expressed in these 19th century cemeteries.

4. Locate at least five gravestones, from different time periods, which have epitaphs. What do these epitaphs say? What might they reflect about attitudes toward death? How does the use of epitaphs and what epitaphs say change over time? What might this mean?

5. Locate a family plot or several gravestones with the same surname. Do you think these individuals are related or are husband and wife? How can you tell? Are other relatives buried in the same area? Are these family burial areas more common in earlier graves or more recent graves? What might this tell you about the changing use of family plots over time?

6. Select five gravestones with men's names and five gravestones with women's names from different time periods. How are men's and women's gravestones similar? How are they different? What might this tell you about the changing roles and statuses of men and women over time?

Questions 1 and 2 are designed to have you take a close look at the cemetery and to notice the importance of elements other than just the gravestones themselves. Question 3 treats each gravestone as an artifact and focuses on the same kind of details an archaeologist would find useful in understanding how artifacts reflect

or holiday decorations of graves. Comparisons of different parts of the same cemetery or of different cemeteries are also interesting. Students can then change over time. Questions about particular aspects of the cemetery, similar to 4, 5, and 6 can be added or substituted. For example, you can examine the special features of military gravestones or children's gravestones summarize their findings in a concluding essay, or share their insights in a roundtable class discussion.

Readings:

Aries, Philippe. 1981 *The Hour Of Our Death*. Alfred Knopf.

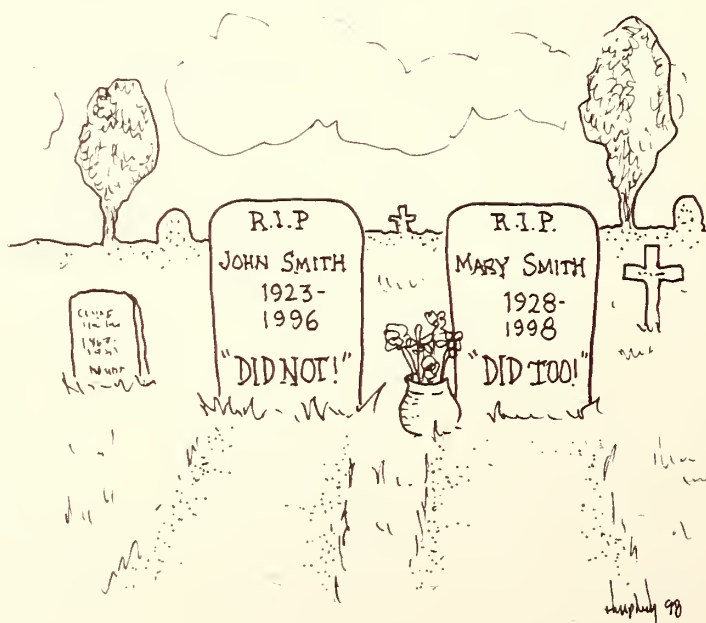
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Weitzman, David. 1976. "Resting Places," In *Underfoot: An Everyday Guide to Exploring the American Past*. Scribner's Sons.

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[Editors' Note: Also of interest is the journal *Markers* published by The Association for Gravestone Studies. Check out their web site at www.berkshire.net/ags/.

An earlier version of this teaching activity appeared in *AnthroNotes*, vol. 8 (2), spring 1986. This and other *AnthroNotes* teaching activities are available free-of-charge by writing: Teacher's Packet in Anthropology, Anthropology Outreach Office, Smithsonian Institution, Washington, DC 20560-0112. This packet serves as a companion to the book *Anthropology Explored: The Best of Smithsonian AnthroNotes*, available from the Smithsonian Institution Press (1-800-782-4612). Book royalties support the printing costs of *AnthroNotes*.]

INDIVIDUAL GRAVE DATA

Recorder's Name _____

Date _____ Observation _____

Cemetery _____

Photo: B/W _____ Color _____ Sex _____ Age _____

Map/Location _____ Born _____ Died _____

Foot Stone Description

Plot Marker (Single/Multiple) Description

Grave Marker (Permanent/Temporary)

Shape	Material	Construction
<input type="checkbox"/> Tablet	<input type="checkbox"/> Wood	<input type="checkbox"/> Unfinished
<input type="checkbox"/> Tablet-like	<input type="checkbox"/> Cement	<input type="checkbox"/> Hand-made
<input type="checkbox"/> Vertical Slab	<input type="checkbox"/> Metal	<input type="checkbox"/> Formally constructed
<input type="checkbox"/> Obelisk	<input type="checkbox"/> Stone	<input type="checkbox"/> Carved
<input type="checkbox"/> Block	<input type="checkbox"/> Granite	<input type="checkbox"/> Molded
<input type="checkbox"/> Triangular Block	<input type="checkbox"/> Marble	<input type="checkbox"/> Soldered
<input type="checkbox"/> Horizontal Slab	<input type="checkbox"/> Slate	<input type="checkbox"/> Cast
<input type="checkbox"/> Pulpit	<input type="checkbox"/> Limestone	<input type="checkbox"/> Cut
<input type="checkbox"/> Figural	<input type="checkbox"/> Other	<input type="checkbox"/> Polished
<input type="checkbox"/> Sarcophagus	<input type="checkbox"/> Unidentified	
<input type="checkbox"/> Cenotaph	<input type="checkbox"/> Field Stone	
<input type="checkbox"/> Other		

Grave Adornment

Permanent	Temporary	Individual	Ritual/Seasonal
<input type="checkbox"/> Potted Plant	<input type="checkbox"/> Flowers	<input type="checkbox"/> Fresh Flowers	<input type="checkbox"/> Easter
<input type="checkbox"/> Plantings	<input type="checkbox"/> Wreath	<input type="checkbox"/> Plastic Flowers	<input type="checkbox"/> Christmas
<input type="checkbox"/> Religious Marker	<input type="checkbox"/> Other	<input type="checkbox"/> Wreath	<input type="checkbox"/> July 4th
<input type="checkbox"/> Military Marker		<input type="checkbox"/> Child's Toy	<input type="checkbox"/> Memorial Day
<input type="checkbox"/> Other		<input type="checkbox"/> Other	<input type="checkbox"/> Other

Marker Dimensions: Height: _____ Width: _____ Thickness: _____

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AFRICAN JAMBOREE

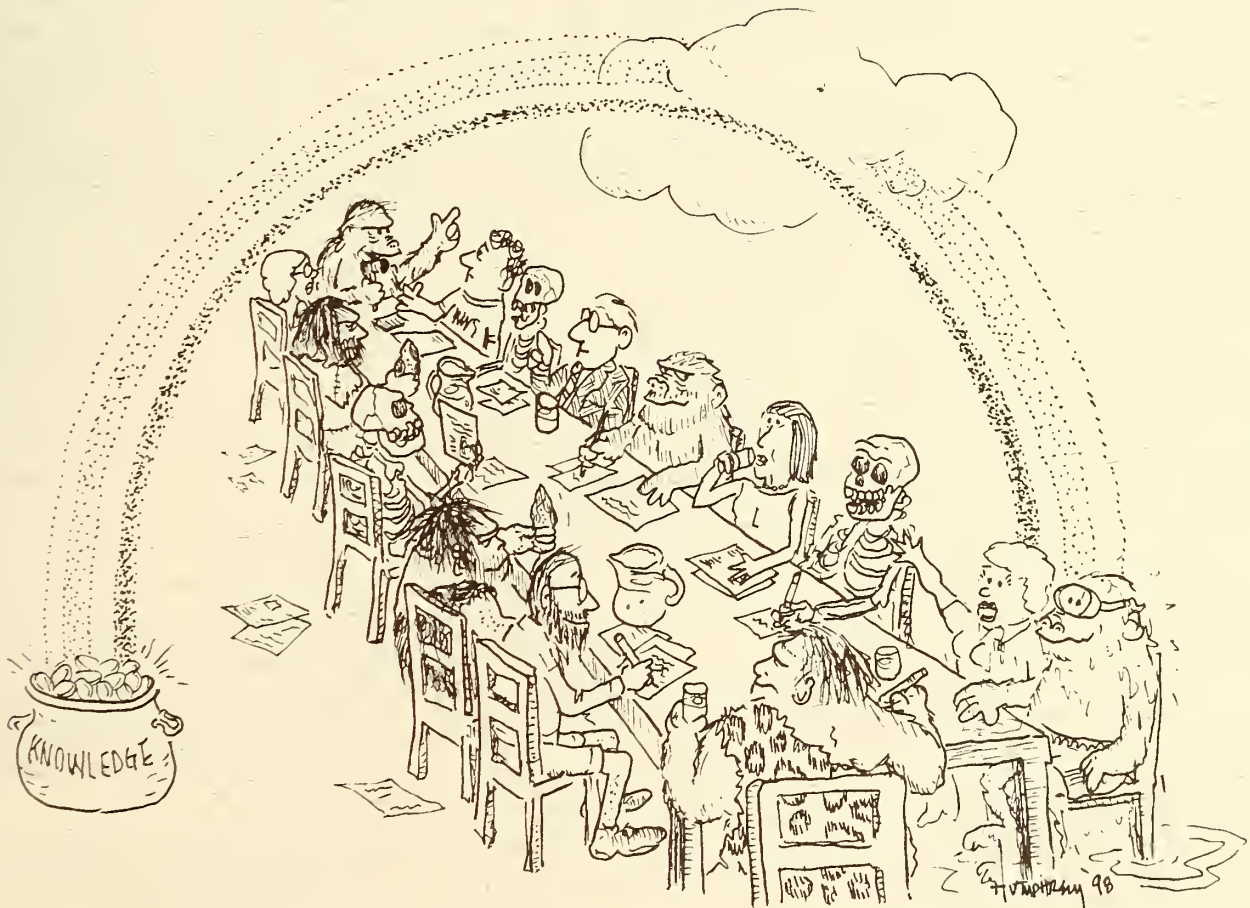
by Bernard Wood



It was the largest scientific gathering ever held in South Africa—the Dual Congress of the International Association for the Study of Human Paleontology and the International Association of Human Biologists—bringing over a thousand scientists from more than 75 countries to meet in Johannesburg the last days of June and the first few days of July. The Dual Congress was a marvelous way to celebrate the contributions Africa has given humanity. Without Africa, after all, there would have been no human evolution as we know it nor any human biology. The venue also reminded us that civilization means much more than cultural complexity. It means a proper respect for human dignity and a real understanding of the benefits and responsibilities of our unusual evolutionary history. We saw both of these in evidence in the “rainbow” coalition that is the new South Africa.

Human biology (the study of the patterns of variation in human physiology and morphology) and human evolution (the study of human evolutionary history) should be intellectual bedfellows, and a few scientists have international reputations in both fields. The doyen of this distinguished group, Phillip Tobias, predictably reminded the participants of the important role Africa has played in human prehistory, a role which Tobias had a major part in establishing. He also informed us that a very recent study implied that Africa also played a crucial role in the origin of mammals.

Tobias, emeritus professor of anatomy at the University of Witwatersrand in Johannesburg, is the president of both organizations, and he used his dual presidency to propose a joint meeting in the “new” South Africa. Organizing such a meeting is a tough assignment in any context, but to do this in a country



facing economic and social “growing pains” was a special challenge, but one to which the nation and its scientists rose. From the words of the Minister who spoke at the opening ceremony to the inevitably more emotional speeches at the closing banquet, it was clear that South African politicians had achieved a perspective on the apartheid years that made them into statesmen and stateswomen. It was a perspective that had a perceptible maturity and moral strength, and it made many of us from so-called “more developed” countries yearn for men and women of equivalent stature to be our political leaders.

Why do scientists attend a continual round of meetings, each packed full of formal presentations? Small workshop meetings are designed to bring together scientists in a particular specialty, to help individuals present new research findings or plan new directions or avenues for their research. But large conferences are not designed to accomplish anything quite so tangible as developing new research direction. Such large meetings are different; they are much more like “jamborees,” meetings of enthusiasts who come together to share mutual interests. But we never call them jamborees. Perhaps it would be more difficult to raise the airfare to go to a “jamboree” than to the more lofty sounding “Joint Congress.”

To use a nautical metaphor, people do not attend conferences to plot a new course for their research; they go to check their present bearings, to make sure that the assumptions they made when they plotted their present course of research are still valid. Such meetings are also a fine opportunity for younger researchers to make the personal connections that are so valuable in science so that when you need data or tips about a better method, you can call up someone you have met face to face. At this most recent Congress, there was little science presented, but I took a young post-doctoral researcher with me and in the few short months since the Dual Congress he has begun two new collaborative projects resulting directly from contacts made at the meeting, probably over a beer late in the evening.

The conference had its amusing moments. A TV company was making a program about Elaine Morgan, author of the “aquatic ape” hypothesis. The hypothesis maintains that this is a scenario that would explain a range of alleged human peculiarities, from the distribution of body fat to the direction of hair on our backs. She argues that support for her hypothesis ranges from the absence of

any evidence for human origins between five and eight million years, to the association of the earliest hominids after 5 mya (million years ago) with lake shore locations. The difficulty with the hypothesis is that it is one of a number of superficially attractive explanations of the events of human evolution that, for the present at least, are not testable and do not deserve to be labeled a “hypothesis.” Other arguments are more plausible: there is little fossil or geological evidence of any kind for the period between 5 and 8 mya in Africa, and stable lake shores are more likely than many other environments to accumulate bones over time, whether from predation or from natural deaths.

The TV program’s thesis was that science is a cosy male clique that has systematically and ruthlessly given the “cold shoulder” to Ms. Morgan and her hypothesis, primarily because she is a woman, and, secondarily, because she is outside conventional academia. Those who have met Elaine Morgan will know that she is a tiny doughty sparrow of a lady whose advanced years have not dimmed her, or her supporters’ abilities to literally pin you against the wall so that she, or they, can make their point. Any refutation to Morgan comes less from an “anti-Morgan” conspiracy than simply from a strategy for survival! At the meeting, the session that Elaine Morgan was to speak at was quite ruthlessly stage-managed with “planted” questioners whose interventions would ensure that the conspiracy thesis would be supported by the session itself.

What was the Congress like for me, a British born and trained paleoanthropologist, formerly Dean of the Medical School at the University of Liverpool, and currently holding a joint appointment at George Washington University and the Smithsonian Institution. Like many of those attending, I presented a 20-minute talk and was the coauthor on another talk and poster. I also organized one of the 18 half-day colloquia, titled “The Diversity of Early *Homo*.” I was asked to do this because one of my research interests focuses on the early stages in the evolution of our own genus, *Homo*. Some of the papers in the colloquium, mine included, reiterated material that is soon to be published, but two of the contributions were original and thought-provoking. Not a bad ratio of “pain to gain.”

I had not expected a theme to emerge from the colloquium, but it did. The point of my contribution

was that since the very first fossil species was attributed to our own genus *Homo neanderthalensis* in 1864, we have been redefining *Homo* to make it more and more inclusive. In my paper I tried to make the case that as it is presently defined, *Homo* makes little sense as a genus. In technical terms, it is not a "clade" as it is not currently limited to the descendants of one common ancestor but includes species from several related lineages. Nor is it a "grade," for it includes species that show a variety of adaptations, rather than species that have common diets, habitats, or locomotor patterns. For example, *Homo habilis* still maintained a considerable ability to use its arms, hands, and feet for scrambling around in trees. I argued that to ensure that *Homo* is both a clade and a grade two of the most ancient species presently assigned to it, *Homo habilis* and *Homo rudolfensis* (see *AnthroNotes*, spring 1996) need to be excluded. As a result, *Homo ergaster*, also known as "early African *Homo erectus*," would be the most primitive and oldest (ca. 2.0 myr) member of *Homo*. If the label *Homo* is restricted to committed bipeds with high quality diets and an ability to disperse over large areas, then the emergence of our genus was as recent as 2 mya. This would mean that as the first stone tools occur prior to this date, they were made by a creature that was still, in terms of adaptations, an australopithecine.

What was intriguing was that two other talks in the colloquium, by Leslie Aiello and Susan Anton, set out the details of research on hominid adaptations and on dispersal patterns, respectively, that was consistent with my hypothesis. On the basis of body shape (large gut, not waist) and size (small), Aiello argued that the australopithecines shared a lower "quality" (high bulk,

low energy per gram) diet with *Homo habilis* and some apes, while *Homo ergaster*, with a taller, leaner silhouette, had made a transition to higher dietary quality. Anton used information on body mass, home range and diets in primates to suggest that *H. ergaster*, with its larger body size and quite different diet, would have been the first member of our lineage with the ability to travel and spread over large areas without much diversification into different forms. This major transition point in human evolution resulted in the first hominid dispersals out of Africa by as early as ca. 1.8 mya.

As with most meetings, my ability to sustain a fresh mind for each session fell off alarmingly as the days went by and 'people fatigue' set in. The most interesting conversation of my five days was on the bus-ride back to the airport!

Conferences rarely follow any predictable pattern, and some of one's most productive research liaisons may be over dinner. At least the venue for this Congress, Sun City, gave us little other than gambling as alternatives to the sessions. Never believe anyone who attends a conference in Paris and then claims he or she went to every session! Scientists are human too.

Bernard Wood holds the Henry R. Luce Professorship of Human Origins at the George Washington University and is Adjunct Senior Scientist in the Human Origins Program at the National Museum of Natural History. He has published extensively on the systematics and functional morphology of hominids and has specialized in early Homo fossil remains.



SHAKING THE FAMILY TREE

(*"Human Rights" continued from page 5*)

married in Nigeria as they would be socially unacceptable women. These arguments persuaded the judge in 1997 to suspend deportation and to consider a positive case for asylum for the family.

"Avoidance of Harm" Key Standard

Harm may be considered to take place when there is death, pain, disability, loss of freedom or pleasure that results from an act by one human upon another (Gert, 1988:47-49). It is the notion of harm done to individuals or groups that can be used to explore the terrain between universal rights and cultural relativism. *When reasonable persons from different cultural backgrounds agree that certain institutions or cultural practices cause harm, then the moral neutrality of cultural relativism must be suspended.* The concept of "harm" has been a driving force behind the medical, psychological, feminist, and cultural opposition to female genital mutilation.

Avoidance of harm has been the key concept in the development of ethical guidelines in medical and biological research and also in federal regulations regulating research in the behavioral sciences (Fluehr-Lobban, 1994:3). Philosophers have also refined concepts of harm and benefit; however, the discussion more frequently occurs around the prevention of harm rather than the promotion of benefit.

Even the most experienced anthropological field worker must negotiate the terrain between universal rights and cultural relativism with caution, to avoid the pitfalls of scientific or discipline superiority. The anthropologist is capable of hearing, recording, and incorporating the multiple voices that speak to issues of cultural specificity and universal human rights, as some have done admirably (Dwyer, 1991). When various perspectives are taken into consideration, still in the end a judgment may have to be made when harm is a factor.

Case Study: Domestic Abuse

The concept of *darar* in the Arabic language and in Islamic family law translates as harm or abuse and is broadly applied in Islamic law (Shari'a) and specifically in three different cultural settings which I have studied, in Sudan, Egypt and Tunisia (Fluehr-Lobban, 1987). *Darar* comes from the same root as that which is used to describe a strike or a physical blow. However, *darar* in Muslim family law as a ground for divorce has been

interpreted to include both physical harm and emotional harm, the latter usually described as insulting words or behavior. It is probably most clear to make a determination between human rights and cultural practice when physical harm or abuse is taking place. It is simpler to stand against physical abuse of women within a marriage. Indeed, Western ideas of physical and mental cruelty as grounds for divorce mesh well with the concept of harm as reflected in "talaq al-darar," divorce due to harm or abuse. A woman who comes to court, alleges harm, proves it with her own testimony or that of witnesses, and is granted a divorce is probably a woman who has experienced the abuse for some time and is using the court, as women often do in Muslim settings, as a last resort.

The divorced husband often does not acknowledge the harm, as is frequently the case with abusive husbands in other countries where the "right" of a husband to discipline a wife is a cultural norm. A relativist position might attempt to split the difference here between the cultural "right" of the husband to discipline a wife and the wife's right to resist. Moreover, the relativist's position would be upheld by cultural institutions and persons in authority, judges for example, with the legitimate right to enforce the norm of "obedience" of wives. My own research shows that wives have often "disobeyed" their husbands and repeatedly fled from abusive domestic cohabitation (Fluehr-Lobban, 1987:120-25). Historically, the frequency of such cases in the Islamic courts led to practical reform favorable to abused wives whereby "obedience" orders to return to their husbands were issued a maximum of three times only. Ultimately, in the Sudan and in Egypt the "house obedience" (Bayt al-ta'a) law was abolished, largely due to feminist agitation and reformist political pressure.

The cultural "right" of a man to discipline, slap, hit, or beat his wife (and often by extension his children) is widely recognized across a myriad of different cultures throughout the world where male dominance is an accepted fact of life. Indeed, the issue of domestic violence has only recently been added to the international human rights agenda, but it is firmly in place since the Vienna Conference of 1993 and the United Nations Beijing Women's Conference in 1995. This relatively new dialogue intersects at a point where the individual rights of the woman clash with a potential cultural defense of a man practicing harm, and is a dialogue that anthropologists could inform and enrich tremendously

by their first hand knowledge of community and family life. Violence against women, against children, against people, is not acceptable on moral grounds nor is it defensible on cultural grounds, although an examination of its many expressions and facets is very useful knowledge for both social science and public policy. The future development of a cross-cultural framework analyzing domestic violence would serve both scientific and human rights work.

Conclusion

The terrain between universal rights and cultural relativism can be puzzling and difficult to negotiate, but the use of the idea of the "avoidance of harm" can help anthropologists and others map out a course of thinking and action. We are coming to the recognition that violence against women should be an acknowledged wrong, a violation of the basic human right to be free from harm that cannot be excused or justified on cultural grounds. Likewise, children in every culture have the right to be free from harm and to be nurtured under secure and adequate conditions. Understanding the diverse cultural contexts where harm or violence may take place is valuable and important, but suspending or withholding judgment because of cultural relativism is intellectually and morally irresponsible. Anthropologists cannot be bystanders when they witness harm being practiced upon any people they study.

Anthropologists can aid the international dialogue enormously by developing approaches to universal human rights that are respectful of cultural considerations but are morally responsible. For anthropologists a proactive interest and participation in human rights is desirable. Areas of human rights that might come to our attention in our work include cultural survival, rights of indigenous peoples, defense against 'ethnic cleansing', or interest in the rights of women and children and persons in danger of harm. Instead of the more usual negative reaction to public disclosure of gross violations of human rights, anthropologists could position themselves to play an "early warning" role that might prevent or ameliorate harm to human beings. Simplistic notions of cultural relativism no longer need impede the engagement of anthropologists in international human rights discourse.

In this spirit anthropologists could be among the best brokers for inter-cultural dialogue regarding human rights. We have moved beyond the idea of a value free social science to the task of developing a moral system at

the level of our shared humanity that must at certain times supersede cultural relativism. Reassessing the value of cultural relativism does not diminish the continued value of studying and valuing diversity around the globe.

Anthropologists can lend their knowledge and expertise to the international discussion and debates regarding human rights by playing a brokering role between indigenous or local peoples they know first-hand and the international governmental and non-governmental agencies whose policies affect the lives of people they study. Anthropologists also can write or speak out about human rights issues in public media where their expertise might inform positions taken by human rights advocacy groups, or decisions made by governments or other bodies that affect the well-being of people they study. If they choose, they can provide professional advice or offer expert testimony where culturally-sensitive matters intersect with human rights issues, such as with female circumcision, or with a cultural defense or justification of domestic violence. In these and other ways anthropologists can engage with human rights issues without the limitations that cultural relativism may impose.

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AnthroNotes editors apologize to Clark Graham, author of "High School Maritime Archaeology Program" in the Spring 1998 issue of *AnthroNotes*. The corrected article is available on the web site listed above.

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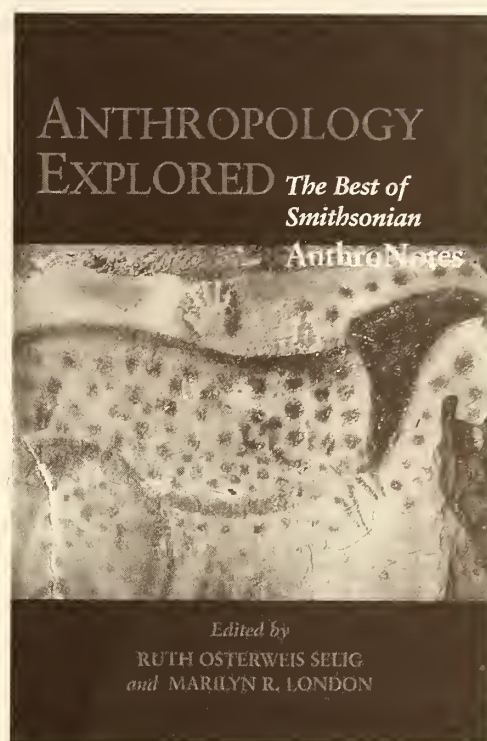
Foreword by David W. McCurdy

Illustrated by Robert L. Humphrey

As more people from varied backgrounds live and work side by side, anthropology has become an increasingly important lens through which to view the extraordinary physical, cultural, and linguistic diversity of those who share our globe. Analyzing ancient artifacts, written history, and contemporary practices, anthropologists seek to understand nothing less than the full range of human physical and cultural development.

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HUMAN ORIGINS: ONE MAN'S SEARCH FOR THE CAUSES IN TIME

by *Ruth Osterweis Selig*

♦ ♦ ♦

"Alan Walker once said to me, 'It does not matter how much you can convince yourself; it only matters how much you can convince your skeptics'—that is science in a nutshell."
Rick Potts, interview, 4/2/99.

Of all the animal species on earth, only humans ask from whence they came. Paleoanthropologists strive to answer the what, the why and the how of that remarkable journey. In a recent article, "Why Are We Human?," Rick Potts, director of the Smithsonian's Human Origins Program, summarized the state of current knowledge:

Due to the rapid pace of discovery, scientists now have fossils from more than 5,000 individuals as far back as 5 million years. That record offers strong evidence that we evolved from apelike species in Africa, and genetic evidence confirms that our closest biological cousins are the African chimpanzees. Scientists from many different fields agree that humans and chimpanzees evolved from a common ancestor that lived between 5 million and 8 million years ago (1999a:1).

Today we know that as many as 12 to 15 different human-like species evolved in the past. Why did some continue and change while most died out? It is this question that has consumed Rick Potts' life, beginning when he was a ninth grader in suburban Philadelphia's Abington High School. The story of Potts' determination to answer this question reveals much about

human evolution and paleoanthropology, but it also offers insight into one scientist's single-minded passion and the development of a new theory—"variability selection"—to explain the why and the how of human origins. This article presents three intertwined stories:

- the development of one paleoanthropologist's career;
- the development of the human species through time; and
- the development of a new theory of human evolution: variability selection.

These three stories illuminate the inextricable nature of scientific advances, human knowledge, and the individual scientist. In addition, the story of Rick Potts underscores the interplay between inherent disposition and environmental influence, no small irony for a scientist whose theory of human evolution focuses on the interplay between the environment and the human lineage's evolving predisposition toward adaptability, diversity, and versatility. The necessity to understand time both as personal time during which an individual life unfolds and as geologic time within which the human lineage evolved is another theme running through the three stories.

INSIDE: URBAN COMMUNITY PROJECT ■ AINU EXHIBIT ■ TEACHER RESOURCES



The Early Years

In a recent interview, Potts traced his earliest interest in origins to playground discussions with his older brother, today a mathematician. Potts' awareness of a passion for human origins became evident during a 9th grade world civilization class: "When I left 9th grade, I knew I would become an anthropologist and that I would spend my life studying human origins in East Africa. I went to sleep at night dreaming of doing just that." That 9th grade year Potts asked his parents, neither of whom had gone to college, to buy him two books: Desmond Morris' *The Naked Ape* and Robert Ardrey's *African Genesis*. He still remembers devouring the sections on animal behavior.

"By the end of 9th grade I was completely hooked; then, in the 11th grade, I took a half year anthropology course." His brother was studying anthropology at college, and they shared books and ideas. A history and a biology teacher supported Potts' ambitions. "My history teacher shared my passion for understanding time, and we talked many times about the differences between individual and geological time." She invited Potts to take the AP exam even though his parents could not afford the cost (she paid for the exam) and he was not even in the AP history class. That experience and the encouragement of his biology teacher made a deep impression on Potts. By the end of 12th grade, in 1971, Potts chose a local university, Temple, to study anthropology and pursue his goal of studying human origins in East Africa.

The Environment

Karl Butzer had published his ground breaking *Environment and Archaeology: An Ecological Approach to Prehistory* that same year. Potts' first anthropology professor at Temple believed the study of the human past could not be separated from the study of ancient ecology and assigned all his students to read Butzer. In his first two years, Potts immersed himself in biological studies, focusing on natural selection and adaptation. He took courses in cognitive sciences and physiology, fascinated by the connection between brain physiology and behavior, realizing there was no way to separate the study of physical from cultural evolution. His senior thesis on stone tools argued that tools carry information not only about human capacity for technology but also about general human behavior. Comparing stone tools



RICK'S PASSION FOR THE STUDY OF HUMAN ORIGINS BEGAN IN NINTH GRADE....

of successive hominid species meant comparing cultural and behavioral differences among species. All this seems familiar today, but in the early 1970s studies of stone tools usually meant statistical studies describing various types of technologies, with no reference to such larger issues of behavior or culture.

Graduate School

Potts went straight into graduate school, choosing Harvard primarily because several of its professors called him for interviews ("I felt as if I was a sport's team recruit; I had not heard much about Harvard given my humble roots, but I was impressed by their interest in me.") Neanderthal specialist Erik Trinkaus, then a young assistant professor, read Potts' application, commenting that "he seemed all over the place." A year later Trinkaus remembered his comment and told him: "Now I understand you want to focus on only one thing, but you want to take everything into account to do it."

Paleoanthropologist Alan Walker, then also teaching at Harvard, became a mentor. Most importantly, he arranged for Potts to do his Ph.D. research on Olduvai Gorge, gaining Mary Leakey's blessing for the work. Thus began the last phase in Potts' journey to become a paleoanthropologist—working in the field. First he was to travel to France to gain experience at several

archaeological excavations, then to East Africa to work both at Olduvai Gorge in Tanzania and at the Kenya National Museum in Nairobi, Kenya, to work on the materials previously excavated by Mary and Louis Leakey at Olduvai Gorge. Rick Potts was 23 years old, it was 1976, and he was about to live out his boyhood dream.

Potts explained that in the 1960s and even the 1970s, the study of human origins was still about finding fossil bones and analyzing stone tools, particularly for the early Plio-Pleistocene period of 1.5 to 2.5 million years ago. Researchers were not yet really concerned about behavior or landscapes. "It was a wonderful time for me to be starting out, with my growing interests in ecology, behavior and natural selection."

The Evolution of Early Humans

The context for understanding Potts' research activities over the next two decades is the story of human evolution, a story he has recounted in several popular accounts of the process that transformed a 5-million-year-old tropical ape into a human species of worldwide influence (1999a). Distinctively human qualities emerged over a period of about 5 million years rather than all at once.

As Potts explains the dramatic story, walking regularly on two legs (bipedalism) was the first big step, forever altering the way our ancestors interacted with their environment. By 4 million years ago, apelike individuals (the australopithecines) had evolved who were bipedal but retained an ability to climb trees. Their brains were about one-third the size of a modern human's, they weighed between 60 to 108 pounds, and their height ranged from 3.5 to 5 feet tall.

Either among the australopithecines or the earliest members of our own genus *Homo*, stone toolmaking began to be common by about 2.5 million years ago. The earliest fossils of *Homo* are at least 2.3 to 2.5 million years old, a time period that also sees an increase in cranial or brain capacity. By 1.9 million years ago, the species *H. erectus* had reached modern human size and body proportions and was fully committed to bipedal walking. *H. erectus* was the first hominid to leave Africa, spreading to Asia by about 1.6 million years ago. *H. erectus*' brain size, however, was not fully human, on average only about two-thirds to three-fourths that of

fossil modern humans. The relationship of *H. erectus* to the various species before it is still hotly debated. How later fossil humans with modern brain size are related to ourselves is also controversial, particularly in the case of the Neanderthals. (For more information on these current controversies, see Brooks, 1998a,b.)

Only after the brain had reached modern size do we see the complex behaviors we associate with being human: art, clothing, complex stone technology, symbolic representation, and religious behaviors such as burial. These emerged only within the past 100,000 years. Although there is no complete agreement among scientists to explain the emergence of fully modern humans, it is agreed that our species, modern *H. sapiens*, has been the only human species on Earth for at least the last 25,000 years. It is only within the past 10,000 years that farming and herding, cities, writing, trade and warfare arose.

As should be clear from this brief synopsis, humanity's features emerged over time; there was no single threshold or step when humans originated.

Olduvai Gorge

It was to examine early stone tool development that Potts traveled to East Africa to do the research for his Ph.D. In 1977 he arrived in Nairobi, Kenya to re-analyze the fossil bones and stone tools discovered and described by the Leakeys, as well as to analyze other data from Bed I of Olduvai Gorge. It was Mary and Louis Leakey's work at Olduvai Gorge (1936-1985) that had helped shape scientific and popular ideas about the earliest origins of human behavior. It was they who tried to identify the maker of the early "Oldowan stone tools" and to clarify early hominid technology and activity at Olduvai Gorge, then considered the world's oldest archaeological site. Today, the Oldowan industry has been dated to at least 2.5 million years at older East African sites and lasts with little change for about 1 million years. To some specialists such as Glynn Isaac, the pivotal question in the archaeology of early humans was to explain "how high density clusters of stone artifacts and animals bones were found together" (1994:8).

New taphonomic studies had begun to document the processes by which fossil bones and associated stone artifacts were deposited, damaged, and buried over time. Processes such as water transport or feeding by

carnivores could alter what archaeologists found millions of years later and, therefore, could influence archaeological inferences about hominid activity. Potts and his colleague Pat Shipman conducted a groundbreaking study on bones from Olduvai Gorge using the scanning electron microscope, comparing marks on fossil bones with marks produced by known causes (such as carnivore activity or damage from excavation) on modern bones. In the journal *Nature* Potts published his first major scientific paper, describing how stone tool marks could be distinguished from damage to bones made by carnivores and other taphonomic processes. With a clearer understanding of human and carnivore tooth marks, Potts now had a way of seeing how early human toolmakers and carnivores had overlapped or interacted (1981). He concentrated on the hominids' ability to make and transport tools over long distances, freeing them from the apes' "eat as you go" survival strategy. The hominids' transporting tools and food to a single place was a critical transition to creating single places of rest, later known as "home base campsites."

Potts' first book, *Early Hominid Activities at Olduvai* (1988), summarizes his detailed re-analysis of Olduvai hominid behavior that explained site formation. Four levels of analysis are detailed: How did the site form? What did humans do there? How did the different sites at Olduvai reflect different activity patterns in space? How did the hominids' activities change through time?

In the late 1970s, while Potts was preparing his Ph.D. dissertation, Glynn Isaac published his influential articles describing home base sites, places where hominids apparently gathered together over one million years ago to share food and tools (1978). Other anthropologists had been studying home base behavior among modern hunters and gatherers, and Isaac proposed an analogy between these societies and the early hominid ancestors. In his dissertation, Potts used studies of taphonomy,

water transport, and landscape analysis to challenge Isaac's view. Contrary to Isaac, Potts concluded that the Olduvai sites did not represent home bases; instead, the earliest hominid sites at Olduvai came before home base development. Based on his re-evaluation of the Oldowan material, Potts asserted that hominids collected stone materials and parts of animal carcasses, obtained through scavenging and hunting, and left them at specified locations, so-called "stone caches," for future processing. In fact, carnivores like leopards and hyenas, attracted to the carcass remains, would have prevented the use of these sites by hominids as the places of primary social activity implied by the home base theory. Potts called his hypothesis "resource transport" (1984, 1991). It was a major theoretical breakthrough, made before he had his Ph.D. in hand, and it was well received by older colleagues in the field, including Isaac.

In 1983 Potts, then an assistant professor of anthropology at Yale University, returned to Africa, this time to direct paleontological/archaeological excavations



at Lainymok, Kenya. Mary Leakey traveled down to visit Potts' excavation, and, impressed with his work, she suggested he turn his attention to the much larger area of Olorgesailie (Oh-lorg-eh-SIGH-lee). The following year Potts gained permission from Richard Leakey, Director of the National Museums in Kenya, to work long-term at Olorgesailie. By 1985 the Smithsonian's National Museum of Natural History had hired Potts to start a new Human Origins Program at the Institution. Within a year, he wrote the first of many grant proposals to fund large-scale excavations at Olorgesailie. Potts' career was launched.

Olorgesailie

For an aspiring paleoanthropologist, Olduvai Gorge was a dream come true, but it was Olorgesailie that changed Potts' life. In the beginning he was after bones and tools and the opportunity to test some ideas regarding home bases by enlarging the context of hominid behavior. To do this work, Potts began to develop a landscape-scale approach to the excavation and study of hominid tools, animals bones and the overall environment. At a single level, 990,000 years old, Potts' team excavated many sites including a huge elephant butchery site. For several summers Potts' team worked to reconstruct the life ways and environmental context of *H. erectus*, 1 million to 600,000 years ago. Potts differentiated his approach from fossil collecting; he was searching to understand the ecological niche of early humans by focusing on excavating an entire landscape, not just surface collecting across the land or putting another fossil onto the family tree.

Soon, however, Potts had begun to ask new questions regarding space and time. What was the ecology of the region through time? What habitats did the various hominids living there have to cope with over a million years in time? With the new dates available at Olorgesailie, Potts realized he could document an entire sequence from 1.2 million up to 49,000 years ago. It was, he said, "an archive of environments, a textbook of hominid behavior...the Rift Valley writ large through time." To analyze and assess this remarkable "archive through time," Potts again assembled an international team to excavate and synthesize the complex data. Potts has always stressed a team approach, working with "geologists, archaeologists, paleontologists,

environmental scientists, and a great group of well-trained Kenyan excavators."

Environmental Oscillation

By the early 1990s environmental issues had come to the forefront of public attention and scientific concern, resulting in new research and multiple techniques to measure environments. Potts adapted these techniques to understanding past climates, environments, soils, and vegetation—applying many of these new techniques to his amazing "slice through time." (1998a: 96-104). What he found was startling. The dating and stratigraphic analysis at Olorgesailie uncovered a widening variability through time. Furthermore, Olorgesailie was the tantalizing lead-in to an examination of the larger global picture of environmental change. Looking at the incontrovertible evidence from soils, vegetation, and lake sediments worldwide, Potts could no longer avoid the key word: oscillation.

By 1992 Potts had become committed to understanding the impact of environmental change on early hominids. Much of that year Potts spent walking up and down the hillsides of the site. "I could walk up a hillside and see the bands of the blinding white sediments of the lake replaced by grey and brown soils followed by the thin salt layer indicating the lake had dried up. But then a little further forward in time, the lake would be back. You walk up and down and the oscillation of the environment becomes unmistakable, and you realize that that was the challenge to the hominids, the oscillation of the environment." But how did that challenge operate?

East African Mammal Study

In 1992 Potts thought constantly about the extreme environmental variability he saw as the crucible through which the human lineage had passed. He kept asking himself where had all our human versatility and diversity come from; and if and why humans had evolved differently from other animals, whose evolution he had studied for years. "If natural selection is going to hone an organism's characteristics to the specific environment in which it lives, then how do you transform a small population of apeline hominids into a species of world-wide influence, diverse and extremely flexible in their

behavior. That is the critical ecological question of human evolution."

Understanding the adaptive challenges for other East African mammals might be a key. As Potts explains, with humans we have no comparison, we have the unique situation of human evolution, and our only comparison is with earlier hominids who did not survive. So Potts turned to a study of large mammals in Africa, re-analyzing the fossil animals from Lainymok, a large and diverse sample ideal for such a study. Together Ologesailie and Lainymok span the time period during which modern human brain size developed—a critical time period for human evolution. Potts and a colleague Alan Deino published their analysis documenting the extinction of an entire group of mammals during this period, around 400,000 years ago (1995). They hypothesized that large numbers of mammals became extinct as a response to rapid climatic fluctuations and extreme dietary specialization. As the mammals eating coarse, low-lying vegetation became extinct, smaller, more versatile, and more generalized eaters emerged; these are the large mammal species still with us today. Potts wondered if the human lineage had gone through a similar pattern of extinction and adaptation as a response to extreme environmental change.

A New Book

In 1990 Potts had signed a contract with William Morrow publishers to write a book dealing with Ologesailie and environmental change. He wrote half the book and then in 1992 realized his entire thinking was shifting. "I had a series of brainstorming sessions at night, wondering if and how environmental oscillation had been the major influence on the developing human lineage. I realized I had to start the book over again. I called my editors, told them I was throwing out everything I had written, but I promised to start over. I knew I was onto something big, and that it would take time to work out the details. All the training I had in college and graduate school, all the early conversations I had with my brother, all my reading of Charles Darwin flooded back. I knew I had to deal with the question of environmental variability and its impact as a major selective factor explaining human evolution."

Potts realized immediately he would have to challenge one of the major theories and assumptions of human evolution: the transition in Africa from

widespread forests to widespread savanna grasslands as the major explanatory factor for the emergence of bipedal, tool using human beings. In his new book, *Humanity's Descent* (1996a), he proposed instead a new theory of environmental variability as the key selective factor explaining the emergence of the human species.

The Savannah Hypothesis

According to conventional wisdom, our earliest ancestors were forced to adapt to a new, drier savannah environment that replaced a once heavily forested landscape. Bipedal walking developed as a favored adaptation to the ground, with hominids using their newly freed hands to make and use tools, especially for hunting. This led to the eating of meat and increased sources of protein that fueled a larger brain. Eventually food sharing, home base living, social interaction, and division of labor by sex emerged. The savannah hypothesis, which Potts was originally taught, had made a lot of sense, but it didn't fit the environmental fluctuations that he had documented. Over the short run some hominids may have adapted to specific environments including the savannah, but over the millennia of time, the human lineage had to accommodate to and cope with huge oscillations or swings in the environment that were manifested all over the world (1998a:109-112).

Variability Selection

It was this variability that Potts identified as the key to the three distinctive breakthroughs of human evolution: bipedal walking (4-1.9 million years ago); stone tool making (2.5 million–1.5 million years ago); and increased brain size (between 700,000 to 150,000 years ago)—each coinciding with increased environmental oscillation. There was a larger amount of savannah in certain areas of the world, but increased fluctuation was just as much a hallmark of global climate and much more influential on the course of human evolution. Potts called his new theory "variability selection," a process that links adaptive change to large degrees of environmental variability. The theory refers to variability as a selection agency, not to the variability or versatility that developed in the human population.

As Potts explains, variability selection "is, in essence, a hypothesis about how hominid evolution has been a response to environments and environmental change."

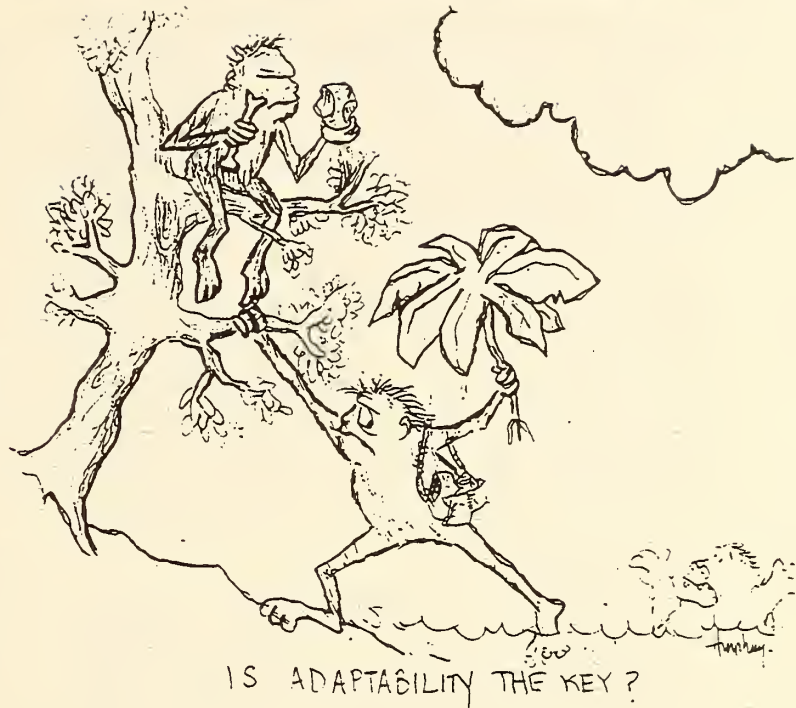
After years of reconstructing environmental variability, as well as the evolution and extinction of mammal species, Potts realized that survival of a versatile species capable of adjusting to novel surroundings was the story of human evolution. As environmental conditions drastically fluctuated, the evolutionary winners were populations that evolved a capacity to respond in new ways to diverse habitats. This process—variability selection—favors genes that improve an organism's adaptability, and the theory explains why our particular pattern of human evolution occurred. As Potts says, "it is not the whole explanation, but I believe it is a critical piece."

Variability selection is also a theory that Potts knows modifies one of the tenets of Darwinian evolution: long-term directional consistency in selection over time, consistency implied, for example, in the savannah hypothesis. In a 1996 article in *Science*, Potts explains the significance of his theory to understanding human evolution: "Hardly just noise, long-term fluctuation was a signal of potentially major evolutionary consequence. I have proposed the term *variability selection* to describe the effects of repeated, dramatic shifting in Darwinian selection over time. This inconsistency over many generations may have had an important impact on hominid evolution" (1996b:922).

Natural Selection

As Potts explains in a recent article: "Natural Selection is the process by which adaptive structures are evolved and maintained. As a result of this century's union of population biology, genetics, and paleontology (the neo-Darwinian synthesis), natural selection is regarded as the main cause of change in organisms in relation to their surroundings" (1998b:81). Traditionally, this meant consistency of adaptation over time. "Selective consistency, or long-term uniform selection pressure, is largely assumed to be the way by which adaptive complexity evolves" (1998b:81). But the adaptive conditions of hominid evolution over time, according to Potts' research, were highly inconsistent on a local to global scale.

Potts' theory posits that inconsistency of environmental conditions had critical implications for hominid evolution. There are several ways organisms can respond to habitat fluctuation (1998b:84-85). The first is simply to follow the preferred environment, an



adaptive pattern that works for a while, but can lead to extinction when large environmental fluctuations occur. The second is to broaden the range of conditions under which an organism can live. This can be achieved by both genetic polymorphism (several different genetic potentials existing within the same population) or by phenotypic plasticity, when organisms can respond differently at any given time with the same genotypic inheritance.

A third avenue of flexibility is "variability selection," or the evolution of adaptive mechanisms within a population which "assist an organism's sophisticated intake of and responsiveness to environmental data" (1998b:85). Examples of such adaptive mechanisms might be new locomotor systems (such as bipedalism) and an enlarged brain to process and generate complex cognitive responses. In light of Potts' theory, the evolution of the brain takes on new meaning, as it is our brain that enables us to adapt to changing conditions, novel problems, and multiple solutions. Climatic oscillation becomes more intense after 700,000 years ago and it is from this time to about 150,000 years ago that the human brain reaches modern size. Potts has stated that his theory requires that we may have to "significantly revise the way natural selection is construed to have operated—not merely as *selection pressure* or as *adaptation* to a model environment, but as

a response to habitat and resource variability from place to place and over time" (1994:23).

Potts points out that in each epoch of human evolution, there were species that evolved as specialists, that adapted to a specific environment and lived alongside more versatile forms that survived after the more specialized forms became extinct. Two examples he cites are the robust australopithecines and the cold-weather adapted Neanderthals, both highly specialized hominids that became extinct. The eventual survival of a single versatile lineage, extraordinarily diverse in its behavior and spread worldwide, may well have evolved as the result of adaptation to our planet's variable environment.

Nature and Humankind

The relationship of nature and humankind is one of the recurring and most thought provoking themes of Potts' popular and extremely well-written volume, *Humanity's Descent* (1996a). "It is important to get the relationship between Nature and humankind right, both in its long-term development and in its present possibility" (44). Potts explains that humans' penchant for setting themselves apart from Nature stems from an illusory divide into natural and human domains...a divide that has "never existed over the long course of human presence on Earth" (267). The implications of this key insight have profound public policy ramifications, for, as Potts says, "the world now rests...on the legacy left by a single species" (44). The fact that our essential human qualities emerged as the result of our ecological relationship to Nature contrasts with the ironic observation that our resulting dominion today could disrupt forever the ecological balance on Earth.

Conclusion

Science moves forward by the process of hypothesis testing, development of new theories, unearthing new data, and proposing alternative explanations. In science, the development of a major new hypothesis or theory is always extraordinary in its originality, but it is, nonetheless, also a beginning; colleagues will test such new ideas with their own data and their own understanding. For Potts, Olororgesailie was the inspiration, environmental change the key to the development of a major new theory to explain human evolution. Variability selection is a dramatic insight and

a theory that others now must take into account in their attempt to explain the human past. Potts and his fellow paleoanthropologists will develop other insights, and modifications of Potts' theory of variability selection will inevitably develop through time. But the importance of this new and provocative theory will stand as a major contribution to the ongoing study of human origins.

What Potts' journey demonstrates is that one scientist's approach to understanding the world around him can grow from many seeds: a sharp, fertile mind with a penchant of its own for "the big picture"; an enduring life-long passion to find out where humans came from; and a determination to unravel the whole puzzle, not just a single piece. The influence of teachers, mentors, colleagues, and the scientists who came before, all influenced Potts as he developed through time. Just as his theory connects the development of the human lineage to the millennia of challenging environments, so one can see Potts' life developing from the interaction of his unique mind and driving passion with the influences of his family, teachers, colleagues, and experiences—his environment through time.

Postscript

As this *AnthroNotes* article was being written, Potts flew to London to present his theory of variability selection—at the invitation of the Linnean Society. Potts must have been aware that in July 1858 Charles Darwin and Alfred Wallace, at the urging of the geologist Charles Lyell and the botanist Sir Joseph Hooker, presented simultaneously their papers on evolution through natural selection—to the Linnean Society. On May 24, 1859, Thomas Bell, president of the Society, reported, in his presidential address, that "The year which has passed...has not...been marked by any of those striking discoveries which at once revolutionize, so to speak, the department of science on which they bear" (1860: viii). For the impact of variability selection, as with the theory of natural selection, only time will tell.

Further Reading

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**For further references, request the bibliography "Human Evolution and Paleoanthropology" from the Anthropology Outreach Office, Smithsonian Institution, Washington, D.C. 20560-0112.

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WHY ARE WE HUMAN?

TEACHER RESOURCES

SMITHSONIAN RESOURCES

On the Web:

♦ *Anthropology on the Internet for K-12*, compiled by Margaret Dittmore, Smithsonian Institution Libraries, is an annotated listing of hot links to selected web sites with information for teachers and students about the field of anthropology. The sites fall under the following headings: general resources, careers, archaeology, social/cultural anthropology, physical anthropology, linguistics, area studies, museums, virtual exhibits, electronic publications, and associations. Each section is illustrated with photos of Smithsonian anthropologists and includes information about their particular research activities. Link it to your own web site! Suggestions of sources to add are welcome.
<http://www.sil.si.edu/SILPublications/Anthropology-K12/>

♦ *Annotated Bibliography on American Indians for K-12* (www.nmnh.si.edu/anth/). Click on the Anthropology Outreach Office.

The bibliography, compiled by Ann Kaupp, Fiona Burnett, Maureen Malloy, and Cheryl Wilson, describes over 800 books and is organized by culture area and tribe and is further divided into non-fiction and fiction, traditional stories, and biographies. The Introduction explains how the books were evaluated, provides information about stereotypes, and offers further resources.

♦ The Smithsonian Office of Education has available on the web (educate.si.edu) and in hard copy two teaching activities for grades 4-9: "Teaching From

Objects and Stories: Learning About the Bering Sea Eskimo People" and "Decoding the Past: The Work of Archaeologists." Also available is the *Smithsonian Resource Guide for Teachers*, a catalog listing materials (many free) from all the Smithsonian Museums and other educational offices. (\$5 for hard copy.) Email: education@soe.si.edu

Educational Kits:

The following kits were produced by the Smithsonian's Center For Folklife Programs and Cultural Studies and can be ordered from Smithsonian Folkways Mail Order, 414 Hungerford Dr., Suite 444, Rockville, MD 20850; (301) 443-2314; Fax: (301) 443-1819. Orders only:

(800) 410-9815. Email:

info@folklife.si.edu.

Web site:

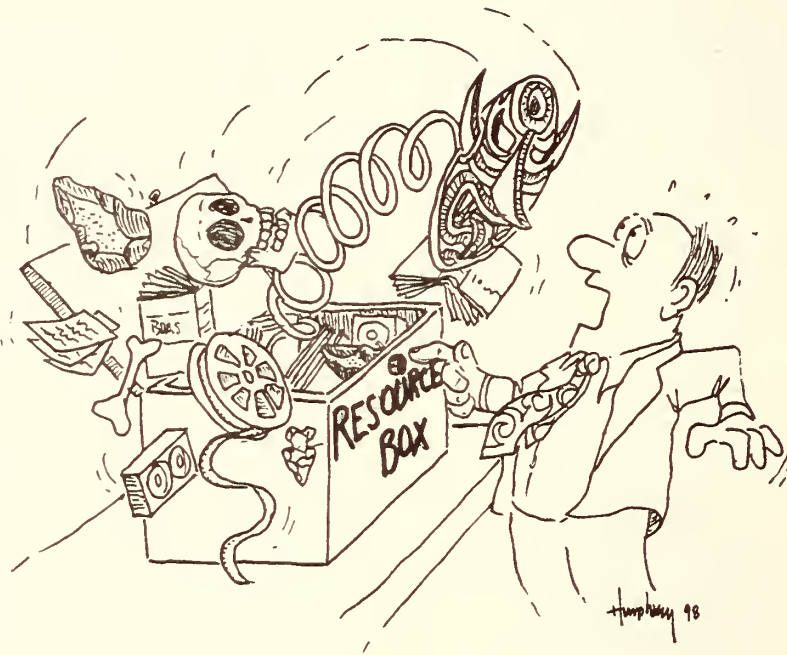
<http://www.si.edu>.

Land and Native American Cultures introduces students in grades 9-12 to the use of the land in three case studies: the Hopi of Arizona; the Tlingit, Haida, and Tsimshian of Alaska; and the Aymara and Quechua of Bolivia and Peru. The units address subsistence, crafts, mythology, and ritual. Includes teacher/student guide with narrative, photographs, resource

listing, and activity questions. 1997. \$35.00. Catalog #SF90011.

Wisconsin Powwow/Naamikaaged: Dancer for the People consists of two video sets showing how powwows incorporate historical traditions and modern innovations. A 40-page booklet with historical background, transcription of the soundtrack, classroom questions, and suggestions for further reading and listening accompanies the videos. This kit is focused for grades 6-12. 1996. \$34.95. Catalog #SF48004

Borders and Identity, a bilingual kit for grades 6-12, explores the complex notion of identity along the



U.S./Mexican border and is organized into four segments—history, belief, expressive arts, and occupational traditions. The kit includes a four-part video, poster-size cultural map, and a teacher/ student guide with classroom activities. 1996. \$55.00. Catalog #SF90010

Learning about Folklife: The U.S. Virgin Islands & Senegal focuses on foodways, music, storytelling, and celebrations. The kit for grades 6-12 contains a four-part video-cassette, 2 audio-cassettes, and a teacher's guide with maps, photographs, and line illustrations. 1992. \$45.00. Catalog #SF90012.

OTHER RESOURCES

On the web:

- ◆ Check out these web sites for Anthropology resources and materials: www.serve.com/archaeology; www.nitehawk.com/alleycat/anth-faq.html; www.plattsburgh.edu/ant/Web_Instructors.html (for the teaching of anthropology), and www.si.edu (Smithsonian Institution website).

- ◆ Keep up-to-date on the Kennewick Man controversy through Friends of America's Past, a fledgling nonprofit organization dedicated to promoting and advancing the rights of scientists and the public to learn about America's past. Concerned about maintaining the integrity of science, this organization includes two archaeologists, a physical anthropologist and an attorney as its board of directors. Friends of America's Past sponsors public lectures and is now involved in raising funds in support of the Kennewick Man case. Contact: Friends of America's Past, 7410 SW Oleson Rd., Suite 202, Portland, OR 97223; website: (www.friendsofpast.org/).

- ◆ The KIDS Report is published biweekly with the support of the Internet Scout Project, the National Science Foundation, and a grant from John and Tashia Morgridge. Produced by K-12 students as a resource for other K-12 students, it is an ongoing, cooperative effort of 12 classrooms from around the United States. Teachers assist and provide support; however, students select, evaluate, and annotate all resources included in every issue of the KIDS Report. [Http://scout.cs.wisc.edu/scout/KIDS/selection.html](http://scout.cs.wisc.edu/scout/KIDS/selection.html). This issue of the KIDS Report, "Kids Investigating and Discovering Sites," dated April 27, 1999, was written and produced by students at Elmore Elementary School in Green Bay, Wisconsin. Some of the topics included are: "NOVA

Online-Ice Mummies," "Odyssey in Egypt," "Old Sturbridge Village," and "The Tomb of the Chihuahua Pharaohs."

Publications:

- ◆ *Dig* is the Archaeological Institute of America's new bimonthly magazine for young people. Its first issue (April/May 1999) includes articles on mummies, a new dinosaur named after the boy who found it, the discovery of an Andean mummy girl, plus new archaeological discoveries and projects and games for readers and much more. To subscribe, write to Dig, Subscriptions Services, P.O. Box 469076, Escondido, CA 92046-9076; call toll free: 877-673-7344; or subscription@archaeology.org. Check out their web site at www.dig.archaeology.org.

- ◆ For teachers looking for readable, up-to-date articles, *Annual Editions* selects articles previously published in magazines, newspapers, and journals and compiles them into one volume. Anthropology, archaeology, and physical anthropology are among the over 65 volume topics available. The 99/00 volume on Physical Anthropology contains Robert Sussman's article "Exploring Our Basic Human Nature: Are Humans Inherently Violent?" (pp. 201-205), originally published in the Fall 1997 issue of *AnthroNotes*. *Annual Editions* provides teachers with an *Instructor's Resource Guide*. Write to: Annual Editions, Dushkin/ McGraw-Hill, Sluice Dock, Guilford, CT 06437, or call (800) 338-3987; fax (203) 453-6000. Price: \$16.84 for single copy.

- ◆ *Discovering Archaeology* is a new glossy bimonthly archaeology magazine for the general reader and specialist that covers discoveries in archaeology and archaeological sciences. Check their web site (<http://www.discoverarchaeology.com/main/htm>), or write Discover Archaeology, PO Box 9473, El Paso, TX 79995, or call toll free at (877) 347-2724.

- ◆ The Society of American Archaeology now has a bulletin board on "Teaching Archaeology in the 21st Century" to discuss issues related to teaching archaeology to undergraduates. Visit the SAA website at: <http://www.saa.org/Education/Curriculum/> and join in the national dialogue.

URBAN COMMUNITY FIELD RESEARCH PROJECT

by JoAnne Lanouette

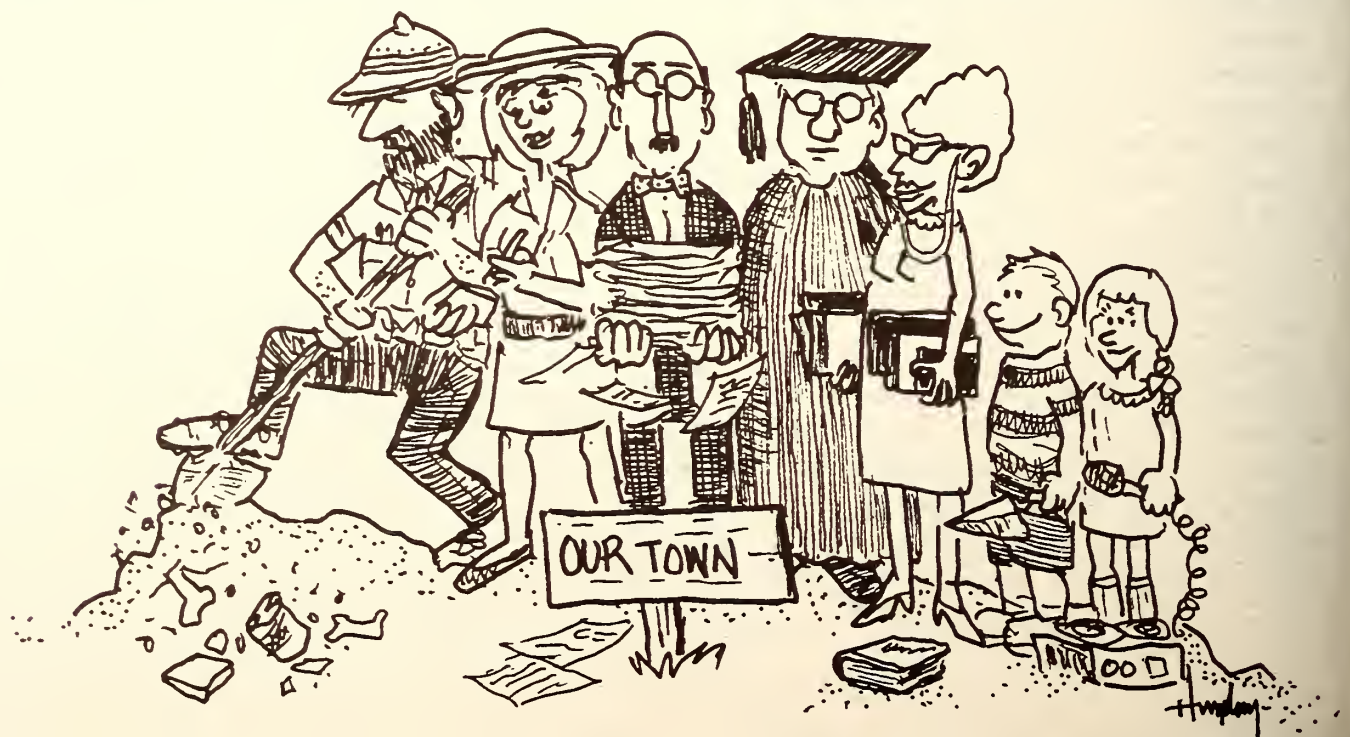


If students grow up in downtown Cleveland (Ohio), attend Cuyahoga Community College (CCC), and take Mark Lewine's anthropology class, they might join a dig on campus and discover much about the history of their own community, an immigrant starting point at various times for English, Germans, Czechs, Italians, Jews, and for African Americans. But the Urban Community Research Project serves many more than one class. In fact, this five-year pilot program in historical archaeology offers an exciting interdisciplinary collaboration among the CCC and a number of area academic institutions, museums and agencies. It draws students from other local community and four-year colleges, junior and senior high schools, and encourages the involvement of citizen volunteers. More than 500 people have participated since the program began in 1994. The team behind this successful effort includes Dr. Mark Lewine, CCC professor of Anthropology and Sociology; consulting historic archaeologist Al Lee; and Dorothy Salem, historian and professor of Women's Studies and African Studies at CCC.

The first site investigated by the Program was originally a private residential property, now a part of Cuyahoga Community College's Metro campus. Standing for over one hundred years in the shadow of St. Joseph's Roman Catholic Church and Franciscan

Monastery, the site was somewhat protected from disturbance. The students' archival and archaeological research, under the supervision of the project's leaders, led to recovering evidence of two identifiable occupations of the site. The earlier occupation, dating between 1825 and 1840, was by as yet unidentified rural villagers who used the site domestically and for cottage industry soap-making. In the mid-1850s the Burkhart family established a residence and wallpaper business on the property. Through the last quarter of the nineteenth century, as Burkhart daughters grew up and married, their husbands' building trades such as tinsmithing, roofing, window-making, carpentry and painting were added to the services offered by the wallpaper business.

Students in the program conducted document research in the archives of the Western Reserve Historical Society, studied maps, and analyzed the remains and contents of cisterns, privies and trash pits recovered archaeologically from the site. The faculty then helped the students integrate the data to help establish the evidence for the social and economic changes that occurred as this outpost of a rural village became a small neighborhood off a large industrialized urban center. Further, the distinctive consumer behavior of the family, who maintained for business reasons a horse and wagon, provides an illuminating



contrast with the more typical "walking city" consumer pattern. Today a parking lot is being built over the site for the CCC's use, but underneath archaeological opportunities still exist.

Current investigations by the Program are at the Long-Severance site, also situated on the metro campus. Student archival research showed that Dr. David Long developed the property in the mid 1840s as a "country estate." Long was a prominent Cleveland physician and merchant. He established his practice and a dry goods store in the village of Cleveland in 1810 and was a central figure in affairs of business, religion, politics, philanthropy and social reform for the next forty years. His descendents, through his daughter Mary Long Severance, have remained prominent in Cleveland business and civic affairs well into the twentieth century.

A major social concern for the Long and Severance families was opposition to slavery. Long and his son-in-law Solomon Severance were founding officers of the Cleveland (1831) and Cuyahoga County (1837) Anti-Slavery Societies. Solomon's brother Theodoric and his wife Caroline were early advocates of a more militant, abolitionist position, and all were later involved in the founding of new Presbyterian churches as old congregations split over the issue. Severance's involvement in African-American affairs continued beyond emancipation; a letter dated 1913 from Booker T. Washington to Louis Severance (Solomon and Mary's son) thanks him for his continued support of Tuskegee Institute.

Urbanization caught up with the Severance home in the early 1860s, by which time Cleveland was the fastest growing urban center in the nation. A portion of the property was subdivided into small, single-family and commercial lots, and a church occupied the corner of a newly erected street. Gradually the area became a middle class section of the walking city, and then gradually the economic and social standing of the neighborhood declined as the area became more industrial. When the Severances moved from the property in 1899, it was purchased and developed for St. Ann's Infant Asylum and Maternity Hospital, an institution operated by the Roman Catholic Diocese of Cleveland for the aid of unwed mothers. The property was obtained from the corporate descendent of St. Ann's in 1973.

Archaeological research is continuing on the Long/Severance site this spring and summer. The Urban Community Research Project has also established an archaeological laboratory with office and teaching facilities. Recently the Martha Holden Jennings Foundation granted funding for the first of what is hoped will be a series of Archaeological Youth Camps, which would attract middle and high school students to the community college and the project. The connection of the Long and Severance families to abolition has served as an initial vehicle for the establishment of a collaborative relationship between the project and the Institute for African American Affairs and Kent State University, Dr. Diedre Badejo, Director.

After five years, Mark Lewine, Al Lee and Dorothy Salem see the collaborative project not just producing a site with findings that promise original and significant contributions to the social and cultural history of Cleveland. Students have learned to integrate information from archives, photos, street maps, census data, and from long-time residents of the area, along with the material culture history found at the site. Originally begun as an applied field experience for Cuyahoga Community College archaeology students, this project has demonstrated its value as a pedagogical tool, a source for interdisciplinary field research, a setting for collaborative work for regional students from a wide variety of schools, and a source for increasing knowledge about community history. The residents' interest in their neighborhood and the significant connection between college and community has deepened. Community college students who participated had their first contacts with students from regional universities, graduate students, faculty from those universities as well as a museum archaeologist and an archivist from the county archives. Visiting these institutions showed the students viable possibilities for their own future study and work opportunities that they never imagined before.

Such a project should inspire other archaeologists, anthropologists, and historians in museums, community colleges, and universities to join together to create community history research projects for their city or town. In the process the barriers between urban

(Continued on page 15)

MAJOR EXHIBITION ON THE AINU: THE INDIGENOUS PEOPLE OF JAPAN

The story of the Ainu of Japan is not unlike that of the indigenous people of other lands, such as the American Indians and the Aboriginal people of Australia. For thousands of years the Ainu occupied the island of Hokkaido in northern Japan as well as the Kurile Islands, southern Sakhalin, and part of northern Honshu. The different geographic areas represented three distinct territorial subcultures with differences in language, oral history, artifact styles, and ceremonial life. Eventually all the Ainu were resettled in Hokkaido as Russia and Japan took control of their lands. Their name for themselves, "Ainu," means "people" or "humans." Their population numbers around 25,000 today, with many more Ainu mixed with the general Japanese population throughout Japan. Because of discrimination, many people do not make known their Ainu ancestry.

The Ainu are physically distinctive from other Japanese and were once thought to be remnants of a "lost" Caucasoid race. The Ainu have more body hair, including heavy beards, rounder eyes, and less facial flatness. DNA, skeletal, and linguistic studies have shed some light on Ainu ancestry. They appear to be more closely related to the Jomon, the ancestral people of Japan, than the people of western and southern Japan. The ancestors of the Western and Southern Japanese were primarily Yayoi immigrants, who brought rice farming from China and Korea before 300 B.C., and to a lesser extent the Jomon.

It wasn't until 1868 during the Meiji Restoration that modernization efforts had a grave impact on Ainu Society. With increasing trade and industrialization and the opening of Japan to the West, the Ainu's northern island homeland, Ezo, was renamed Hokkaido, and began to be valued for its fish, fertilizers made of fish, and timber. The

Japanese were encouraged to emigrate here to farm and take advantage of these natural resources. The Japanese government then initiated efforts to assimilate the Ainu into Japanese society and take away their native rights, land, and resources. By 1899 the government's actions were codified in a "protection act" meant to destroy Ainu culture. The Ainu, however, kept many aspects of their culture alive such as art, music, rituals and beliefs, while much of their material culture was sold to foreign collectors and museums. Today a renaissance of Ainu culture is taking place in which people are again learning the native language and practicing old traditions such as weaving bark cloth and making dugout canoes. An historic event took place on May 8, 1997 when the Japanese government officially recognized the Ainu as a people with a unique language and culture.

Now the American people have an opportunity to learn about the indigenous people of Japan in a new

traveling exhibition that opened on April 30 at the Smithsonian Institution's National Museum of Natural History. "Ainu: Spirit of a Northern People" is the first major North American exhibition of Ainu culture and the first to feature contemporary Ainu living traditions as well as ethnography. The curators for the exhibition, Chisato Dubreuil, of Ainu ancestry, and William Fitzhugh, Director of the Arctic Studies Center at the National Museum of Natural History, and project manager David Dubreuil, worked closely with Ainu, American, and Japanese scholars to produce the exhibition. An Ainu carver, Masahiro Nomoto, was brought to the Smithsonian to build for the exhibition a traditional Ainu canoe and a house, which is the center of Ainu life.



The five major themes of the exhibition are: spirituality, which permeates all aspects of Ainu life and their relations with nature; the importance of trade with other Pacific Rim peoples; cultural identity as it has evolved over several thousand years; the vitality of Ainu traditions; and the emergence of fine art in Ainu culture. Perhaps the most extraordinary items of the exhibit are the modern paintings, textile pieces, and sculptures by Ainu artists. In combination with more ancient and traditional pieces, these pieces using modern artistic conventions and materials demonstrate the persistence of traditional Ainu themes and symbols as well as the integration of Ainu people and their artists into the modern world.

The exhibition will be at the Smithsonian through January 2, 2000. A comprehensive catalog with over 50 articles by Ainu scholars is available from the Smithsonian museum shops and the Arctic Studies Center.



ARCHAEOLOGY SYMPOSIUM FOR LOCAL EDUCATORS

D.C., Maryland, and Virginia teachers are invited to attend "Teaching the Past Through Archaeology," a two-day symposium organized by the Smithsonian's Anthropology Outreach Office and the Society for American Archaeology Public Education Committee, to be held September 22 & 23, 2000. Lectures will cover such topics as the Vikings, ancient diseases, African American archaeology, what bones can tell us about the earliest Americans, and the impact of El Niño on prehistoric populations. Workshops on archaeological concepts, Mayan and underwater archaeology, and teaching with historic places will demonstrate how archaeology can enrich all classroom topics. For more information, contact Ann Kaupp, Department of Anthropology, Smithsonian Institution, Washington, DC 20560; (202) 357-1592; fax: (202) 357-2208; email: kaupp.ann@nmnh.si.edu.

For further information:

Arctic Studies Center homepage at www.nmnh.si.edu/arctic/

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Ann Kaupp
AnthroNotes Editor



("Urban Field Research Project" continued from page 13)

community, community college, university, and museum can diminish, and at the very least, student interest in archaeology, anthropology, and other social sciences can increase. For students, learning more about their city's history makes their city come alive for them.

JoAnne Lanouette
AnthroNotes Editor

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ANTHRONOTES has a three part mission:

1. To more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
2. To help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of subjects; and
3. To create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

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NEW DISCOVERIES IN PALEOANTHROPOLOGY:

WHAT'S NEW, WHAT'S TRUE, AND WHAT'S IMPORTANT?

by Alison S. Brooks and Richard Potts

JUL 06 2000

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The headline announces: "New fossil shakes up our family tree."

The evening news features an intense, lean and sun-tanned academic pointing out the features on this new lump of bone that will change everyone's view of human evolution. Thousands of young listeners imagine themselves walking across the desert, stumbling by chance on an important skull.

The last four years have witnessed an avalanche of new discoveries from fieldwork, paralleled by new discoveries in the lab. The new laboratory discoveries stem partly from more careful analytical techniques (e.g. refitting of bones and stones or cut mark analyses) and partly from a technological revolution in human origins studies, including computerized data bases, CT scans, extraction of ancient DNA, studies of modern DNA as a key to the past, studies of sediment chemistry, and new dates and dating techniques. Few realize that most of what's new in human evolution actually comes out of the lab, after months or years of painstaking research.

Are we better off now than four years ago when it comes to answering the big questions of human evolution: What makes us human? What is unique about our species (*sapiens*) or our genus (*Homo*)? What is shared with older ancestors or with the African apes? What made us emerge as human? How did humans evolve in time and space? Why did we evolve the way we did? What allowed us to expand out of Africa and colonize so much of the world's surface that we now endanger

the world itself? What gave us the edge over the Neanderthals? With the help of the new technologies and an expanding data base, we are now in a better place to begin to answer these questions than ever before, and we are also better able to understand the stories we read in the daily newspapers reporting "the latest finds."

FROM FIELD TO FRONT PAGE

Few fossils come to light intact or even in large pieces, and rarely does an excavation of an archaeological site yield any human fossils at all. Most hominid fossils have been found by chance or by walking over the landscape in large-scale surveys of fossil-bearing sediments determined by scientists to be of an appropriate age for hominids to have lived there. Field workers learn to recognize tiny fragments of skull or long bone as potentially human. They learn to detect the gleam of tooth enamel in the slanting light of the afternoon sun and to follow a trail of fragments uphill until it disappears into the hillside. The fossil on the table probably shattered and was dispersed as it eroded out onto the surface where a paleontologist could spot it.

One bit of human bone may result in a massive earth-moving operation, as the surrounding earth is scraped and sifted to recover every possible piece no matter how small. At the end of a day or after a week sifting the archaeologist's bone bag bears little resemblance to the reconstructed skull on the newsroom table. Only after months of preparatory work — finding which pieces join together and modeling the

INSIDE: FAMILY FOLKLORE ■ WEB SITES ■ INDIAN LANGUAGE MAP PUBLISHED



missing parts—does the skull begin to take shape. Only then can it begin to undergo the comparative study that can answer the question: Is this really something new, something that means a new species or a new genus? Or is it the same as an earlier find, only bigger, perhaps a big male? While the palaeontologists piece together the fossil, other laboratory scientists are hard at work figuring out its age, its environment, and its behavior. These studies are based on the bones, stone tools, and associated sediments from which the fossils or tools eroded.

Publication of a new hominid species usually occurs in either the British journal *Nature* or the American journal *Science*. The controversy often begins immediately. Is the fossil actually associated with the material used to date it? What are the possible sources of error in the dating method used? Is it really different enough from existing fossils to justify assignment to a new species?

The question about a new species is especially difficult. In living organisms, a species is defined as a group of organisms that can mate and produce fertile offspring. But with fossils, unlike living organisms, there are no 'tests' for determining whether something new is or is not a separate species, and many morphological species indicators like plumage or coat color are missing. Designation of fossils at the genus level is even more controversial, as genus implies both shared morphological pattern, implying a common adaptive strategy and common descent from a distant common ancestor.

This article discusses new finds affecting our family tree, including two new species, one from Europe (Spain) and one from Africa (Ethiopia). A second major section, "News From the Lab," focuses on the re-analysis of research data using new technologies, reflected in news stories about chimpanzee learned behavior, large-scale mammalian extinction, and the relationship between brain size and body mass in understanding our early ancestors. Finally, a new look at *Homo habilis*, *Homo erectus* and the Neanderthals emphasizes once again that what we know in science always keeps growing as new information and technologies improve with time.

CORRECTION: The last issue of *AnthroNotes* should have been Volume 21 No. 1, not Volume 22.

OUR FAMILY TREE: NEWS FROM THE FIELD

Two new species joined the family tree between 1997 and 1999: *Homo antecessor* from Spain and *Australopithecus garhi* from Ethiopia.

***Homo antecessor*: A New Species From Europe**

Homo antecessor is based on fragments from the TD6 level at the Gran Dolina cave, near Atapuerca, Spain. Its approximate date of 800,000 comes from the fact that the fossils lie below a magnetic change point. The sediments above have a magnetism similar to that of today's Earth, but the sediments below have a reversed magnetism, that is the "north" recorded by the sediments is actually "south" today. Evidence of magnetic reversals occurs in sediments all over the world and the most recent shift from "reversed" back to "normal" has been dated by argon laser techniques (see page 3) to 780,000-791,000 years. The fragments include the lower face of a child with several teeth, a fragment of frontal bone (forehead region), a small piece of a jaw and several long bone fragments. At least six individuals are represented, and some of the bones show cut marks made while the bone was fresh, a possible sign of cannibalism.

The discoverers of *H. antecessor* (Bermudez de Castro *et al.*) argue that the shape of the nose region is not that of *H. erectus* but instead resembles some features of *H. sapiens* and Neanderthals; hence the name "antecessor". They argue that it is the ancestor of both Neanderthals and modern humans before the two lines diverged. Others suggest that it may be the ancestor of a Neanderthal lineage that split off from the modern human lineage before *antecessor*. Without more pieces from Gran Dolina or other European fossils from the same time period, however, it is difficult to say whether its separate status will continue. It could also prove to be just an early form of a European species known as *H. heidelbergensis* that lived in Europe from about 500,000 to about 200,000. The dating is also only approximate since we do not know how much time elapsed between the burial of the fossil and the magnetic shift at 780,000.

The interesting question raised by the naming of a new European species at an early date is the antiquity of the separation between a European human lineage leading to Neanderthals and an African human lineage leading to modern humans. Were Neanderthals, who do

not appear until around 200,000 years ago, the final branch of a large European tree, all adapted to colder and more seasonal conditions than elsewhere in the Old World? Did the split between the two lineages occur after or before *antecessor*? In either case, if the split is ancient, how do we explain the later development of behavioral similarities between Neanderthals and their African and Near Eastern cousins? Could this be a case of parallel evolution? Or is this new member of the family tree just a temporary offshoot that died out without descendants?

A Second New Species

In Africa, another much older new species, *Australopithecus garhi*, was named by Asfaw *et al.* in 1999. The word *garhi* means 'surprise' in the local Afar language. *A. garhi* comes from a region on the west bank of the middle part of the Awash River, in the northern Rift Valley of Ethiopia. The partial cranium and possibly associated jaw and limb bones from a different site are dated to 2.5 million years ago by a highly accurate technique that uses lasers to release and measure tiny amounts of argon gas trapped in small crystals of volcanic sediments.

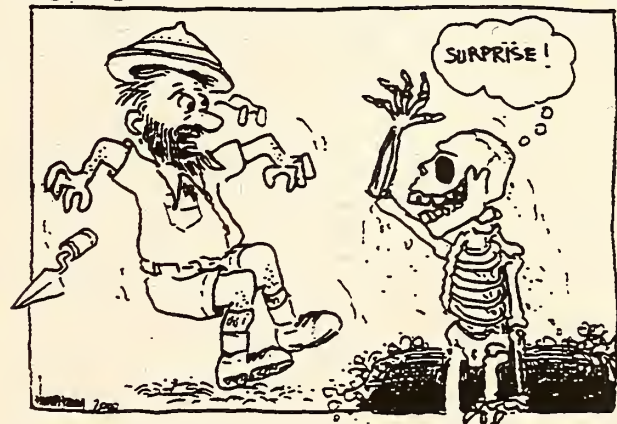
A. garhi was a surprise because it displayed a combination of features not seen before. Big cheek teeth (molars and premolars) with thick enamel and what may be a sagittal crest recall the robust australopithecines (*Paranthropus*) and place the fossil in the genus *Australopithecus*. The brain case is quite small (ca. 470 cc). However, unlike the robust australopithecines, *A. garhi* does not have reduced incisors, and the face does not have the bony reinforcements in the cheek that give the australopithecine face a concave or "dished" appearance. Arm and leg bones found 300 meters away from the skull are from a single individual, who may or may not belong to the same species as the skull. But the limbs are unique for the time period — arms as long as Lucy's for climbing, but much longer legs for walking bipedally, suggesting that bipedal walking was well-established before humans gave up the trees altogether. *A. garhi* possibly could be the ancestor of our own genus, but at least one skeptic has suggested it may be a female robust australopithecine.

Did Bipedalism Develop From Knuckle-Walking?

Recently researchers working in the collections of ape skeletons at the Smithsonian were studying a ridge on the wrist end of a forearm bone (radius) found in knuckle-walking apes. On a whim, they decided to see if this ridge was present in the 'Lucy' skeleton. To their surprise, Lucy and other australopithecine fossils had the ridge, suggesting that we may be descended from a knuckle-walking ancestor. Other scholars, however, argue that the knuckles on Lucy's hand-bones are not broad for weight-bearing like the knuckles of apes, making it unlikely that australopithecines actually used this form of locomotion. This study helps to reconcile evidence from anatomy with the strong DNA evidence that chimpanzees are more closely related to humans than to gorillas. It also raises the question of why upright walking would evolve from an ancestor that was already adapted to life on the ground.

"Always Something New Out of Africa" (Ancient Greek Proverb cited by Pliny the Elder and C. Darwin, 1859)

Although 2.5 million years ago (mya) is a critical time in the transition to a human way of life based on meat-eating and stone tool manufacture, it is not a well-documented period in human evolution. Relatively few fossils from this time period have been found in East Africa. *A. afarensis*, whose skeleton is known to the world as 'Lucy' but to Ethiopians as 'Dinkanesh', had disappeared by about 2.7 mya. Of the existing fossils dating to around 2.5 mya, most belong to a group called "robust australopithecines." These are sometimes grouped in the genus *Paranthropus* and are distinguished by their massive molars and premolars, used to chew tough vegetable foods. In South Africa, where the first



australopithecines were discovered back in the 1920s and 1930s, *Australopithecus africanus*, the first named species of *Australopithecus*, is the only known hominid in this time interval. *Australopithecus africanus* had large chewing teeth relative to *Homo*, but smaller teeth and a less massive jaw and face than the robust group.

Around 2.3 to 2.1 million years ago, a few fossils with larger brains and/or smaller chewing teeth have been included in our own genus *Homo*, in part because of the change in tooth and brain proportions, and in part because they were associated with crude stone tools. One of the most recently found and the oldest member of this group is a fossil upper jaw described by Kimbel *et al.* from the Hadar area of Ethiopia, also in the Awash Valley, associated with early flake tools and dated to 2.3 mya. Unfortunately, scientists have not found any part of the braincase, associated limbs, and other features that would help to determine its lifestyle and evolutionary relationships.

Another new, early African fossil is making headlines while still in the ground. Fossil foot bones from a very old layer—perhaps 2.8-3.1 mya—at the Sterkfontain cave near Johannesburg, South Africa, were published four years ago. Last year, the rest of the skeleton was discovered beneath where the foot bones were found. It is apparently an entire skeleton of an *Australopithecus africanus* that fell into the cave and lies crumpled on the floor head down and feet turned up. It will be years before scientists study all the details of this fascinating find, as the bones are encased in solid rock that formed around them and must be carefully picked apart.

Oldest Stone Tools

The oldest known stone tools come from Ethiopia, about 100 km to the north at Gona, near Hadar. Although a firm date of between 2.5-2.6 mya and a brief description were published in 1997, debate on the nature of these tools is suspended until they are published in more complete form by their excavator, S. Semaw. Other stone tools from the Lake Turkana basin in northern Kenya date to 2.3 mya. These tools from the site of Lokalelei were described in 1999 by Roche and coworkers as surprisingly elaborate, involving the removal of as many as 30 flakes from a single core. The record suggests that stone tools appear with and may even precede the appearance of members of our own

genus, *Homo*. Previous work had suggested that the earliest toolmakers were not capable of elaborate toolmaking sequences involving many steps, but this new research suggested that toolmaking abilities were somewhat sophisticated even by 2.3 mya. The analysis of the older tools from Gona will be extremely interesting, particularly as no members of the genus *Homo* are known from this age.

No stone tools were found in direct association with *A. garhi*, but there was indirect evidence of their use. In the area that yielded the limb bones, there were a number of bones of extinct horses and antelopes that showed sign of butchery. Deep scratches with the characteristic sharp edges of stone tool cut marks indicate where meat and sinews had been sliced from the bone, and hammerstone impact fractures made while the bones were fresh show how they had been broken open for marrow. If this behavior can be attributed to *A. garhi*, then this hominid clearly shares behavioral features with later humans, even though its brain was still small and the teeth still large. It may be an early indicator of what we now recognize as a common pattern of *Homo*, in which new behaviors drive and select for changes in morphology—tools before brains.

Behavioral innovation in early hominids may not be so surprising. Assembly of a large database of chimpanzee behaviors allowed researchers to demonstrate last year that chimpanzees display a wide range of different behaviors across Africa, all of them learned and transmitted from one generation to the next. Some groups of chimpanzees use sticks to fish for termites; others use rocks and sticks to crack nuts. Some hunt small animals; others rarely do. To a certain extent, then, chimpanzee behavior fits the basic definition of human culture, habits and practices that are particular to each society and are passed on through learning.

OUR FAMILY TREE: NEWS FROM THE LAB

Some of the most important news on the hominid front does not derive from new fieldwork or fossil finds, but from laboratory experiments and from reinterpretations of existing finds using new technologies. These range from CT scans to statistical techniques made possible by huge computerized databases and new sophisticated computer modeling.

In a long-running laboratory experiment at Indiana University, a bonobo or "pygmy chimpanzee" named

Kanzi continues to learn stone tool making, although his favorite method is to throw the stone against something hard until it shatters. His abilities and the problem-solving experiments being conducted with oranges at the National Zoo in Washington, D.C. show that we have underestimated the cognitive abilities of our closest relatives. It also demonstrates how sophisticated the oldest tools at Lokalelei were, compared to those made by Kanzi.

A large database of mammalian fossils from the Turkana basin allowed researchers at the Smithsonian to test whether or not a major dry spell 2.5 million years ago caused the extinction of many East African animals and their replacement by savanna-adapted species, including early humans (e.g., *A. garhi*). The researchers found that the appearance of new species and the disappearance of old ones were spread throughout the 1 million year period between 3 and 2 mya in the Turkana basin, which offers the richest and best dated record of animal evolutionary change in Africa during this critical interval. Thus the hypothesis of a major "turnover pulse" at 2.5 mya was not supported by the data. The researchers found, however, that after a gradual rise in the number of species up to 2 mya, a significant drop in species numbers occurred, especially around 1.8 mya.

Recent research on the larger brain sizes that mark the emergence of *Homo* also utilizes new statistical databases and techniques for determining body mass from the upper leg bone (femur). When brain size is calibrated by body size, it turns out that brain size increases between 2.5 and 1.8 mya, but then remains relatively constant from 1.8 to 0.6 mya. Brains were not getting bigger through the early Pleistocene, people were! What is surprising, after more than a million years of roughly the same brain size, is the dramatic leap in brain size at around 600,000–700,000 years ago, as new species like *H. heidelbergensis* take over. What was the reason for this huge increase in relative brain size? New environments colonized? More variable environmental conditions? New social structures and ways of making a living? The data are unclear but new work in the Middle Pleistocene is suggesting an earlier and earlier emergence of complex abilities.

NEWS OF *HOMO HABILIS*, *HOMO ERECTUS*, AND THE NEANDERTHALS

Is *Homo habilis* really *Homo*?

The earliest members of the genus *Homo* are *Homo habilis*, defined on the basis of Olduvai Gorge specimens in 1964, and *Homo rudolfensis*, defined on the basis of East Lake Turkana specimens in 1986. Since 1985 accumulating evidence has demonstrated that at least one of these species still maintained a number of specializations for life in the trees, like long arms, short legs and curved fingers. In addition, these hominids exhibit very little of the marked reduction in tooth size that characterizes our genus and leads to our smaller faces. *Homo* was supposedly characterized by large brains, language, tool-dependence, and manual dexterity. New data have shown that the brains of these fossils are not large compared to their body mass, and that we cannot determine whether or not they had language abilities to a greater extent than the apes. Tools now appear before the first fossil attributed to *Homo* and occur with *Australopithecus* and *Paranthropus* as well. New studies of hand function show that either the hand of *H. habilis* was not as fully modern as we had supposed or that apes possess many of the same manipulative abilities. In a major review of these issues, Wood and Collard suggest that *H. habilis* and *H. rudolfensis* do not share the adaptations characteristic of later members of the genus *Homo* and should be grouped instead with *Australopithecus*.

Homo Erectus: Fuel for Thought?

If Wood and Collard's proposed reassignment of *H. habilis* and *H. rudolfensis* to the *Australopithecus* genus is widely adopted, the first member of the genus *Homo* will be the species *H. erectus* or its African relative *H. ergaster*. These fossils are best represented by the almost complete skeleton of an adolescent boy from Kenya dated to 1.5 mya. He was tall and larger-brained and had reduced chewing teeth. A controversial recent article cites these features to suggest that cooking was already part of the *erectus* cultural repertoire and may have been an essential adaptation allowing *H. erectus* to spread out of Africa. There is no direct archaeological evidence for cooking at early African sites, with the possible exception of some burned bones from South Africa (see *AnthroNotes* 18(2) Spring 1996.) At Koobi Fora, on the

east side of Lake Turkana, other support for early human use of fire comes from burned patches whose magnetic properties studied in the laboratory may indicate the use of fire by humans, since human-tended fires have a higher temperature and longer "burn-time" in a very small area than most bush fires. Natural bush fires, however, cannot be entirely ruled out as causes of either the burned features or the charred bones.

Even thick beds of what appears to be ash may not indicate fire. "Ash" from Zhoukoudian in China, the *Homo erectus* site listed in most textbooks as the oldest site with controlled fire, may not be the remains of fire after all, although it is only about 500-300,000 years old. The sediment, studied by a new infrared technology, does not have the chemical constituents or characteristics of wood ash. Some of the bones, however, were charred and may have been burned somewhere else and carried or rolled into the area of the cave sampled, indicting that fire was at least in use by this time.

When did *H. erectus* arrive in Asia? Or was it an earlier species that made the trip? Stone tools reported from the southeast Asian island of Flores in 1998 would seem to suggest that not only was *erectus* in the region by 1.5 mya, but also came in boats or had the capacity to make them! This is a good example of a story that has not been widely accepted. Are the stone tools really tools? Or just chipped rocks from a stream bed? Is the date a good one? (The *next oldest* tools in southeast Asia are less than 700,000 years old and may be only 40,000 years old!). There is mounting evidence from both Java and China, however, that hominids were in east and southeast Asia by about 1.5 mya.

Another new Asian find that is challenging current models are the stone tools from the Bose basin, South China. For over a half century, archeologists have thought that large bifacial handaxes characterized the stone technology of Africa and western Asia and Europe for most of the Pleistocene, while simpler stone technology typified East Asia. The boundary between western bifaces and the more casual flake-and-core industries in the east is known as the "Movius line," after the Harvard prehistorian who first described it in the 1940s. The Movius line has been used to suggest that Asian populations of *Homo erectus* and later hominids did not have the same capabilities as hominids in the west. Excavations by Potts, Huang, and their

team from the Smithsonian and the Chinese Academy of Sciences have shown, however, that large bifaces were made in South China around 800,000 years ago. The total collection of stone tools from the Bose basin differs in detail from the Acheulean handaxes collections in the west. But in stone flaking ability and the overall shape and size of the large tools, the Bose tool collection is strikingly similar to stone technologies made at the same time in Africa.

Further damage to the Movius line comes from two sites in northern Japan, Takamori and Kamitakamori, dated to more than 250,000 years ago and possibly more than 500,000 years ago, in an island region of the world once thought to be occupied only towards the end of the Pleistocene. Located in the mountains west of Sendai, the tools include well-made symmetrical axes or adzes, chipped on both sides. This symmetrical and bifacial approach to tool-manufacture is characteristic of the Acheulean industry found from India to England and south to the Cape of Good Hope after 500,000 years ago. Such tools are not found in southeast Asia, at least not until very late in the Pleistocene.

The Japanese tools are not "Acheulean," and do not share the stylistic or functional attributes of "hand-axes," but they do exhibit similar capabilities. In addition, some of the small bifacial tools are grouped in discrete pits and include pieces of several different colorful raw materials. Not only have the raw materials been transported over many kilometers, but the arrangement suggests to the excavators (Kajiwara and others) an early example of symbolic behavior, indeed one of the earliest examples anywhere in the world. Others have questioned the age determination, the stratigraphy, and the association between the dated material and the artifacts, but a recent fact-finding expedition to the sites by an international team could not find any problems with the dating or associations. The combined Japanese and Chinese finds indicate that the Movius line model is flawed, and at the very least we must look for new interpretations of *H. erectus* behavior in Asia.

Neanderthal News

At the more recent end of the human evolutionary story, the finds are equally dramatic and equally split between new field results and restudy of older materials with new techniques. Views of the Neanderthals themselves have

been shaken up by a new fossil child from Portugal. Dated to only ca. 25,000 years ago, long after the Neanderthals are thought to have disappeared from Europe, the fossil child is said to display some Neanderthal features in its skeleton. In a heated exchange in the pages of the *Proceedings of the National Academy of Sciences*, Erik Trinkaus, the senior morphologist in the study, suggested it was an example of hybridization between Neanderthals and modern humans, while Ian Tattersall, another authority on Neanderthals, argued that this is not demonstrated.

The genetics revolution has also had an impact on views of the Neanderthals as well as on other developments in human history. Two recent studies of mitochondrial DNA (passed only through the female line), which was extracted from the original Neanderthal fossil, show that it is *very* different genetically from ourselves. The differences between us and the Neanderthals are so great that geneticists estimate that our ancestors split off from them at least 600,000 years ago!

More and more Neanderthal sites show evidence of cannibalism— human bones smashed and cut and treated like other faunal remains. This may confirm an analysis of the bone chemistry of Neanderthals published in 1992 that indicates they were almost exclusively carnivorous. The debate over Neanderthal language continues. One study by Kay *et al.* suggests that the bony canal containing the nerve for the tongue muscle used in speech was as large in Neanderthals as in ourselves and shows that they spent a lot of time in oral communication.

In Africa, the contemporaries of the Neanderthals were early *Homo sapiens*, with more modern morphology. One aspect of this morphology, perhaps *the defining* aspect, was the repositioning of the face beneath the braincase instead of out in front, creating a new relationship between the tongue and the back of the throat that facilitated speech. This new relationship as discussed by Lieberman can be most clearly seen in the morphology of the sphenoid, the bone that divides the braincase from the face and cradles the pituitary gland just behind the nose. Since most of this morphology is *inside* the skull, studying it requires CT scans of the fossils, a new application of this technology. Most hospitals have down times late at night when they are willing to allow use of their machines by paleontologists.

The Smithsonian's division of physical anthropology has its own CT scanner. Some CT scans of important fossils are even available on the web [www.anthro.univie.ac.at/bodo/bodo/html].

Africans may have looked modern when Neanderthals still occupied Europe, but whether or not their *behavior* was also modern is a major debate involving Brooks and others. New evidence from South Africa itself suggests that these early members of our species already were catching ocean fish and making bone-tipped spears, much like the inhabitants of several sites excavated by Brooks in the eastern Democratic Republic of Congo, dating from ca. 80,000. Other early sites of around this age have engraved and notched ostrich eggshells and bones, as well as masses of red ochre. Evidence for other sophisticated and complex behaviors by the African contemporaries of Neanderthals is accumulating rapidly as new regions of Africa are explored.

Journalists know the public is hungry for news about our human origins, and stories of our distant past appear with increasing frequency. The need to educate our students and the general public more broadly about science and anthropology has never been more clear.

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www.nationalgeographic.com (on footprints at Langebaan, and other stories).

www.paleoanthro.org (abstracts of papers for paleoanthropology meeting in Philadelphia April 4-5, 2000 and "Palaeoanthropology in the News" featuring current and recent newspaper stories.)

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TEACHER RESOURCES

Web Sites Relating to Human Evolution

Web sites compiled by the Smithsonian's Human Origins Program of interest to teachers and students:

www.indiana.edu/~origins/

Consists of full text lectures with photographs and images. Includes links to other sources of information. A great site for students.

www.wsu.edu:8001/vwsu/gened/learn-modules/top_longfor/lfopen-index.html

A good introductory page with plentiful information presented clearly.

www.mc.maricopa.edu/anthro/exploratorium/hominid_journey/central.html

A site with excellent graphics that touches upon most of the major topics on human evolution.

www.sscf.ucsb.edu/~hagen/crania/

A site put together by Philip Walker and Edward Hagen with some amazing 3-D skulls using Shockwave plug-ins. Download time for the Shockwave files can be a bit long on a 28.8 modem, but the effort is worth it.

www.emory.edu/LIVING_LINKS/

A useful site for those interested in primatology in general. The research center focuses around a population of chimpanzees at the Yerkes Primate Center at Emory University in Atlanta. Offers some great videos showing basic chimpanzee behavior.

www.indiana.edu/~origins/

Full text lectures with photographs and accompanying images. Includes a number of links that students will find useful.

www.wsu.edu:8001/vwsu/gened/learn-modules/top_longfor/lfopen-index.html

A good introductory page with abundant information presented clearly.

www.mc.maricopa.edu/anthro/exploratorium/hominid_journey/central.html

This site, with great graphics, touches upon just about all of the major topics of human evolution.

Other Recommended Sites:

Harvard University Biology links
mcb.harvard.edu/BioLinks.html

Ask Eric Virtual Library
ericir.syr.edu/Virtual/index.html

Education Index Anthropology Resources
www.educationindex.com/anthro/

Stones and Bones Physical Anthropology Center, LAUSD
www.lalc.k12.ca.us/catalog/providers/170.html

The National Museums of Kenya
www.museums.or.ke/

The Olorgesailie Site Museum, National Museums of Kenya. **www.museums.or.ke/psmolord.html**

www.cruzio.com/~cscpecon/htm

This site has new information about China; argues against the out-of-Africa theory of modern human origins.

The Paleoanthropology Society
www.paleoanthro.org/

This web page of the professional organization for palaeoanthropology has a number of good links, field schools, etc.

Jeanne Sept's links to other sites
www.indiana.edu/~origins/links/evolinks.html
Most of these links have been reviewed by the University of Indiana faculty.

Institute of Human Origins
<http://www.asu.edu/klas/iho/index.html>
Highly recommended. Focuses on new work in Ethiopia and elsewhere.

The Neanderthal Museum
www.neanderthal.de/
An excellent site.

Scientific American Discovering Archeology Magazine
www.discoveringarchaeology.com/index.shtml
This is actually an excellent news source and has an up-to-date newspaper and an AP citation file. Editors include faculty from Harvard and elsewhere

Pictures of Record
www.picturesofrecord.com/
A commercial site for ordering images and slides.

Ancestors Unearthed Fieldnotes, Carnegie Museum of Natural History
www.clpgh.org/cmnh/exhibits/ancestors/index.html.
This site relates to their new exhibits.

TOWN MEETING ON TEACHING EVOLUTION

In light of recent statewide decisions affecting the teaching of evolution, the American Institute of Biological Sciences (AIBS) and the National Association of Biology Teachers held a town meeting on March 22 in Arlington, Virginia. The evening event was held in conjunction with the AIBS annual meeting, which was co-sponsored and hosted by the Smithsonian Institution.

The meeting room was packed with scientific researchers and educators from across the country who heard from the following speakers: Rodger Bybee (executive director, Biological Sciences Curriculum Study); Eugenie Scott (executive director, National Center for Science Education); David Wake (professor of integrative and comparative biology, Univ. of California, Berkeley); Brad Williamson (AP biology teacher at Olathe East High School, Olathe, KS); John Herron (Univ. of Washington, Seattle); and moderator M. Patricia Morse (Zoology Department, Univ. of Washington).

While 66% of Americans want evolution to be taught as science, textbooks are putting in the disclaimer that evolution is "theory not fact." Rodger Bybee,

author of *Achieving Scientific Literacy: From Purposes to Practices* (1997), summarized four challenges in teaching evolution: 1) to introduce the scientific concepts of evolution; 2) to develop an understanding of inquiry and the nature of science for students; 3) to develop new materials and approaches for teaching about evolution and the nature of science; and 4) to support science teachers.

The speakers agreed that good curriculum materials on evolution are lacking. Using the National Science Education Standards, teachers and researchers need to become partners to produce stimulating materials for classroom use—and even bring back living organisms into the classroom for teaching evolution, advocated Brad Williamson, Kansas high school biology teacher.

Audio tapes of the town meeting are available for \$10.00. Call (202) 628-1500 ext. 261; fax: (202) 628-1509 or email: cmoulton@aibs.org.

Related Web Sites:

American Institute of Biological Sciences
www.aibs.org

National Association of Biology Teachers
www.nabt.org

Society for the Study of Evolution
An international organization of biologists actively studying evolution at major universities and research institutions throughout the world.
<http://lsvl.la.asu.edu/evolution/>

National Center for Science Education, Inc. (NCSE)
www.natcensci.ed.org/
Provides advice and support for teaching evolution.

National Academy of Sciences "Teaching About Evolution and the Nature of Science." Available online.
www.nap.edu/readingroom/books/evolution98

www.talkorigins.org
This site counters creationist arguments against paleoanthropology, but includes generally interesting information on evolution as well. One particularly useful portion of this site is a FAQ (frequently asked questions) area devoted to human origins:
www.talkorigins.org/faqs/fossil-hominids.html

INDIAN LANGUAGE MAP

The University of Nebraska Press has published the map "Native Languages and Language Families of North America," compiled by Ives Goddard. It is available in two formats. The "Folded Study Map" (20" x 22 1/2") is identical to the map in the pocket of Volume 17, *Languages, of the Handbook of North American Indians*, except for being on heavier paper. The "Wall Display Map" (38" x 50" including text) is an expanded version of the same map; the larger size has provided enough room to indicate the location of every known Native language of North America, even where they are in such small areas that they could be mapped only at the family or sub-family level on the original map. This is the only published map that has located every language. Many major dialects are also included.

On both maps, 62 language families are distinguished by separate colors, making the linguistic diversity of North America strikingly evident. Areas with no surviving linguistic documentation are left white.

The maps are accompanied by a brief descriptive text and a complete classification that includes unmapped dialects and two post-contact mixed languages. The text for the smaller map is in a separate booklet. The one for the larger map is printed on the left side of the sheet and can be folded under or cut off to display only the 38" by 41" map, if desired.

The Folded Study Map (ISBN 0-8032-9269-4) lists for \$14.95. The Wall Display Map (ISBN 0-8032-9271-6) is provided rolled in a sturdy mailing tube and lists for \$19.95. To order from the University of Nebraska Press, call 1-800-755-1105; fax: 1-800-526-2617; outside the U.S. 402-472-3584; email: pressmail@unl.edu; web site: www.nebraskapress.unl.edu

Ives Goddard is volume editor of the Handbook of North American Indians: Volume 17: Languages, and linguist in the Smithsonian Institution's Department of Anthropology.

ANTHROPOLOGY CURRICULUM

Anthropology. 2000. Gene Boteler and Mary Boteler. The Center for Learning. 259 pp.

This curriculum is written by two former participants of the Smithsonian Institution/George Washington University Anthropology for Teachers Program who teach anthropology at the high school level. The authors have designed this spiral-bound manual as a primary teaching tool or supplementary resource.

Anthropology is organized into five parts. Part 1: "Studying the Human Story" introduces students to the study and fields of anthropology. Students conduct an anthropological study of their fellow high school students, determine what objects can tell us about culture, gain a perspective of the concept of time, and learn how natural selection works within nature.

Part 2: "Humanity's Closest Relatives" explores the origins of human physiology and behavior by focusing on the primates. Part 3: "Human Beginnings" explains how biological anthropology determines what makes us human. This section covers the fossil evidence, mitochondrial DNA studies and migration theories, and genetics.

Part 4: "Hallmarks and Touchstones of Culture" demonstrates the variety of the human condition and explores such topics as cultural change, kinship, gender roles, marriage, economic activities, environment, warfare, and more. Part 5: "Expressions of Culture" focuses on taboos, religion, language, art, potlatch, sports, and a Yanomamo case study.

This curriculum contains 40 creative lesson plans and 80 handouts. While it is geared for grades 9-12, it easily can be adapted for lower grades. The authors have made suggestions on handling such potentially sensitive or controversial topics as evolution and religion. While this book is an excellent text for anthropology, it also would be a valuable supplement for teaching classes on biology, history, world cultures, math, social studies, and art.

Order from: The Center for Learning, PO Box 910, Villa Maria, PA 16155; (724) 964-8083; (800) 767-9090; www.centerforlearning.org. The book is listed under senior high electives on the web site.

TEACHER'S CORNER: FAMILY FOLKLORE IN THE CLASSROOM

[Editors' Note: This article, compiled by *AnthroNotes* editor Ruth O. Selig, is based on the research and writing of staff that originally developed a Family Folklore Program for the Smithsonian Institution's Folklife Festival, as well as additional materials collected in Laramie, Wyoming, for a teachers' in-service workshop taught by Selig and Laramie High School English teacher, Karen Maxfield. Many of the ideas are drawn from *A Celebration of American Family Folklore* by Steven J. Zeitlin, Amy J. Kotkin, and Holly Cutting Baker.

Recently the National Endowment for the Humanities, in partnership with the White House Millennium Council, undertook a "millennium" project called *My History*, an initiative that "offers all of us a way to explore family history as we discover how our own family stories connect to the history of our nation." The NEH guidebook, *My History is America's History: 15 Things You Can Do to Save America's Stories*, offers specific ways to preserve family memories and treasures through activities that make history an exciting adventure.]

Introduction

Over the last few decades, historians, sociologists, anthropologists, and folklorists have begun to focus attention on community studies, teaching us much about the varied traditions flourishing in America. Within our country we must look to the experiences of ethnic and religious groups, the lives of women and children, the history of regional and occupational groups, and even to our own family folklore to find the creative and cultural expression of the American past. "For every famous literary and photographic work, there are hundreds of thousands of stories and snapshots in which Americans have invested a large portion of their creative genius. Family tradition is one of the great repositories of American culture. It contains clues to our national character and insights into our family structure" (Zeitlin, Kotkin, and Baker, p.2).

Family folklore, then, consists of family stories, expressions, customs, traditions, and photographs that characterize a family's life. Having students collect, record, and write about their family folklore can be an exciting and meaningful way for them to connect themselves to broader American culture and history, as

well as help them sharpen their skills in social studies and language arts.

How To Begin

Since family folklore consists of traditions, stories, artifacts, and photographs, each of the approaches described below can be the focus of class projects.

Holiday Analysis:

Explain to students that a family tradition is a special practice that a family reenacts in approximately the same way, day after day or year after year. A birthday celebration, Passover Seder, or Thanksgiving dinner may give rise to family traditions as may other holidays such as the Fourth of July or Labor Day.

On a chart, have students make a vertical list of all the holidays they or their families celebrate, and briefly describe in horizontal categories what traditions are associated with each. For example, students can list what foods are eaten, when and where the holiday meal is served, and who usually attends. What games, if any, are played? Are certain objects or dishes always present? Are gifts exchanged, and if so how, when, and where? Are songs sung, music played, dances danced, prayers offered, or speeches given? Is the national flag displayed? Is religious service attended?

After compiling their individual charts, students should be ready to discuss the origin of holidays and the various ways each is celebrated. It should become readily apparent that holidays originate for a variety of reasons, but that while students share some traditions with one another, other traditions are unique to each person's family. Some of this interesting variation arises from regional, ethnic, and religious background, but some of this variation also arises from family and community history. As students share their common and different experiences, a rich blending of family and cultural history should emerge, along with new understanding that both the yearly cycle and our personal lives are marked by continuing celebrations and rituals.

Interviewing Family Members:

The next project might be the recording of a student's own family history through information gained by interviewing another family member. Every interview will be different, and students should be encouraged to create their own questions. The "Interviewing Guide

and Questionnaire" offered at the end of this article should be useful in helping students conduct successful interviews.

Family Stories:

Once students have conducted interviews they will be in a good position to share and analyze their family folklore. Researchers have detailed certain recurrent themes in family folklore stories such as the "crossing over" stories recounting the migration west in covered wagons, crossing borders from one county to another, or remembering the ocean voyages ending at Ellis Island; stories of family heroes, rogues, or misfits; stories of parents' youthful antics or courtship and marriage; or stories of family misfortunes, feuds, or escape from near death. Ask students to share their stories and see if they can identify any of these or other common themes.

Planning a Family Folklore Unit:

After students have done a holiday analysis, interviewed older family members, and collected family folklore stories, a number of class projects and units are possible. Students can make a collection of photographs, objects, and recipes handed down in their families. The class may want to make an illustrated collection of particularly amusing or dramatic family stories. Photo albums can be shared, and photo-journals or scrapbooks can be created combining stories, reminiscences, family expressions, family photos, genealogy charts, and personal and family time lines marking and illustrating important family events and changes.

Through these and other projects described in the attached list, students should gain an appreciation of tradition and continuity from one generation to the next, and the value of preserving traditions, objects, and ideas from the past. Through family folklore a teacher can bring history to life and life to history, as well as help students connect their personal and family past to broader cultural and language arts study.

Family Folklore Projects

Classroom Exhibits:

Students can build classroom exhibits using posters, photographs, artifacts, and stories drawn from their own family folklore to illustrate topics such as "Western Expansion," "Immigration," "Victorian Era," "Jazz Age," or "The Depression."

Scrapbooks or Photojournals:

Scrapbooks or photojournals can be organized in a variety of ways using family trees, genealogical charts, photographs, family stories, jokes, expressions, games, nicknames, songs, etc. Much of what students learn through interviewing older family members can be included. Some students may choose to focus this project more on their own personal history if they cannot gather enough material on their larger families.

Heirlooms:

Have students find out what objects they have which are family keepsakes or heirlooms. Have them find out the history of these objects and the stories behind these family treasures. Students can then write descriptions or imaginary stories about these important and symbolic objects. How do the heirlooms connect past, present, and future? What do they reflect of the family and the larger culture? Students can make a "Class Collection" of objects which could become heirlooms for a future generation.

Crafts:

In many families hand skills are carried down through the generations. Students can try to learn a handicraft from an older member of their family or research an earlier method of production from a specific period they choose. Once the research is completed, students should try to replicate the method as closely as possible for such crafts as candle dipping, soap making, hide tanning, quilting, basket weaving, ham curing, vegetable canning, and jelly or bread making.

Calendars:

Students can make a family food calendar by interviewing parents or grandparents about their family food traditions and recipes, particularly favorite foods, traditional holiday foods, and birthday foods. Each student can then make a food calendar with a family recipe and drawing illustrating each month. On the calendar all the holidays of the year can be marked as well as any family birthdays and anniversaries.

Home Remedies:

Ask students to research how their parents and grandparents cared for a) hiccups, b) a cold or the flu, c) warts, and d) indigestion. Then students can share their "cures" in a class discussion focusing on "family folk medicine."

Names:

Students can collect information about their first, middle, and last names, as well as any family nicknames. In class discussion it should become clear that names originate in a variety of ways and that names often reflect complex family tradition, origins, and even naming fashion trends. Students can research naming ceremonies and customs from a variety of religious traditions and cultures. Finally, each student can create a personal Coat of Arms, Shield, or Name Crest illustrated with pictures symbolizing activities, values, or traditions important to their families.

Class Banquet:

Students bring in a variety of favorite family recipes, and together the class plans and prepares a "feast" made up of family foods and other traditional meal customs. Students who cannot contribute food can often contribute these customs, a prayer or recitation before the meal, or a game or song to come just after the banquet.

Guest Speakers:

Invite interested parents or grand-parents to the classroom to share their particular food or holiday customs, family stories, photo albums, or handicrafts. Invite a religious leader to discuss ceremonies and rituals which mark important "rites of passage" such as birth, marriage, and death.

Time Lines:

Ask students to make an illustrated time line of important moments in their own lives: birth, birthdays, first school, pets, hobbies, travels, new skills, etc. Then ask them to make an illustrated time line of their family's history beginning with the birth date of the oldest member of the family. The line should include important births, marriages, and deaths, but also significant events such as migrations or moves, occupational changes, educational achievements, travels, etc. Family photographs or drawings can be used for illustrations.

Local Historical Society:

Visit your local museum or historical society and have students identify connections they can see between their own family history and the history of their community as reflected in the exhibits.

Imaginary Family Folklore:

Divide the class into groups, each one responsible for creating an imaginary family folklore. Each group must 1) create an "ancestor" and a story of migration to America; 2) have a family story of a hero or rogue; 3) describe an heirloom; 4) create an unusual holiday tradition. Groups then share their "folklore."

Family Folklore to Teach Writing

1. Many descriptive and narrative writing assignments easily grow from a study of family folklore. For example, students can describe:

- a) a childhood memory, a holiday meal, a family heirloom;
- b) a scene or person in an old family photograph;
- c) the family history imagined for a person in a photograph book;
- d) an amusing family story elaborated and illustrated;
- e) a short autobiography or family history illustrated with drawings or family photographs.

2. History and research paper assignments might include:

- a) relating family history to broader political, social, or economic events by asking students to incorporate interview material into papers on such topics as the depression, women's roles in the 1950s, World War II, and the beginning of the space age;
- b) a research paper based on events during the week the student was born;
- c) a study of the 20th century, decade by decade, using old magazines and newspapers, along with family histories.

3. For any novel or short story your class is reading, students can imagine, create, and write the family folklore of a particular character.

4. Writing Proverbs:

- a) Students can write and illustrate a story explaining the proverb: "If you want to know the apple, you've got to study the tree."
- b) Students can read books of proverbs to choose two or three that relate to family folklore and then use them as a basis for a story and illustration.

- c) Finally, students can try to write their own family folklore proverb.

For most of the activities and projects described in this Teacher's Corner, it is useful to have students conduct family interviews. Below is a guide adapted, with permission from the authors, from *A Family Folklore Interviewing Guide and Questionnaire* by Holly Cutting Baker, Amy Kotkin, and Margaret Yocom, 1978.

Interviewing Guide

A word of Warning:

Because family folklore exists only within the context of a living family, it is constantly evolving. Each generation will forget or alter the lore that it has received, but that same generation will add new verbal lore and new traditions. A tradition does not have to be old to be worth recording. Collecting family folklore is one case in which too much is better than too little. Tapes can be edited and transcripts can be discarded, but the tradition, story, or expression that you neglect to record today may exist only in memory next week. No one can record all of a family's folklore.

Equipment:

Note-taking and tape recording are the usual means of recording family folklore. Both methods have advantages and disadvantages. When a choice is possible, you should use whichever will work best for your interview.

Note-taking can be distracting and make it difficult to participate in the conversation or activities involved with the interview. Also, the expressions of the voice of the informant are lost. A tape recorder may at first make the participants uneasy but they will soon become accustomed to its presence. A small cassette machine with a built-in, omni-directional microphone will give the best results. A ninety-minute cassette is a good choice since it will record substantial segments of an interview without interruption. The microphone should be placed so that all voices, including yours, can be picked up. Run a test before you begin the actual interview and adjust the machine accordingly. As far as possible, all extraneous noise should be eliminated.

Although not as essential as a tape recorder, a camera is a useful piece of equipment. Besides providing a visual record of the participants, it can also be used to

copy any documentary records that your informant might offer such as photographs or scrapbooks.

People to Interview:

Start with yourself. You will know a great deal about your family history. Questions you come up with will give you guidelines for how to interview other people.

The first outside person you interview should be someone with whom you feel very comfortable. A parent or sibling is a good choice. Don't neglect non-relatives. Your grandfather's best friend might tell you things about him no family member knows. Each interview will give you clues about whom you might interview next.

Place:

A spontaneous, natural context is the best to bring about the flow of memories--family dinners, talking with grandma while doing the dishes or cleaning out closets. If possible, plan to hold your interview while doing a familiar kind of activity like walking, baking, or visiting -- anything that might naturally bring up memories. You might use an heirloom or photographs to help move the interview along.

Ethics:

Because of the personal nature of folklore, students must be careful to protect the privacy and rights of all family members. Before initiating a unit in family folklore, it is a good idea to explain the class project to your students' families. Assure all involved that students will interview only willing family members. Explain the purpose of the unit; for example, that the class is studying family folklore as part of their study of American history and that students will learn about writing, analyzing, and reporting information gathered through research and interviews. Before any interview, students should explain to the person being interviewed the purpose of the research.

Planning an Interview:

Spontaneous interviews will have to be handled as they happen. However, if possible, students should plan their interviews. It is even possible to supply informants with questions ahead of time. Questions should be developed so that one follows another logically. A few well-prepared questions will work better than many poorly prepared ones.

1. Well-prepared questions are:
 - a. concise, to the point, and not ambiguous.
 - b. free of emotionally charged words. Be as objective as possible; avoid asking a question to get a specific response.
2. Helpful hints in formulating questions:
 - a. to get at facts, ask what? when? who?
 - b. to get at ideas or descriptions of relationships, ask how? why?
 - c. to get at analysis or critical thinking, use the words: please explain, can I have a reason for that, can you account for, what is the importance of, tell me why you agree or disagree, give illustrations for, how do you explain?
 - d. to get an evaluation or provoke further thought, try asking: explain, show me, clarify, how would you evaluate?
 - e. to get description, use the words: tell me, discuss, describe, illustrate, paint a word picture.
3. Realize there will be some information you will not be able to get. There may be sensitive material people do not want to discuss.
4. Be as low key as possible. Realize that you may be seen more as an interrogator than a son, daughter, or friend during the interview.
5. Show interest. Take an active part in the conversation without dominating it. Be a good listener.
6. Know what questions you want to ask, but don't be afraid to let your informant go off on a tangent. He or she may touch on important subjects you did not think to ask about.
7. Never turn off the tape recorder unless you are asked to. Not only does it break the conversation, such action suggests that you think some of your informant's material is not worth recording.
8. Use props whenever possible. Documents, letters, photo albums, scrapbooks, home movies, and other family heirlooms can be profitably used to stimulate memories.
9. Be sensitive to the needs of family members. Schedule your sessions at convenient times. Older

people tire easily; cut the interview off at the first sign of fatigue. Don't slight family members who show interest in your project. Interview them even if you have reason to believe their material will be of minimal value.

10. If possible, prepare some kind of written report for the family members you interview as a tangible result of their participation. Remember to save all your tapes, notes, and other documentation that you accumulated. Label everything with names, dates, and places.

A Possible Questionnaire

Every interview will be different, and students should be encouraged to formulate their own questions. Every family is unique, and every interviewer has his own interests and style. Thus no single set of questions will elicit all possible family folklore from all families. The most useful questions will be those developed through a person's own knowledge of his/her own family. However, the list below may be helpful and suggestive to students first embarking on family folklore interviewing.

Suggested Questions:



1. What do you know about your family's last name? Its origin? Its meaning? Did it change when your relatives first came to America? If it changed, what was it before and why was it changed? Are there any traditional first names, middle names, or nicknames in your family? How did they get started? When your parents married, did your mother keep her own last name? What does her last name mean? What is its history? How did your parents choose your name? What will you name your children?
2. What stories have come down to you about your grandparents or parents? For example, what do you know of their childhood, schooling, marriages, occupations, political activity, religious affiliation, hobbies? How many different occupations can you name from your family? Are there any special talents or hobbies which have come down in the family such as playing a musical instrument, needlework, painting?



brides, unusual courtships, arranged marriages, elopements, runaway lovers?

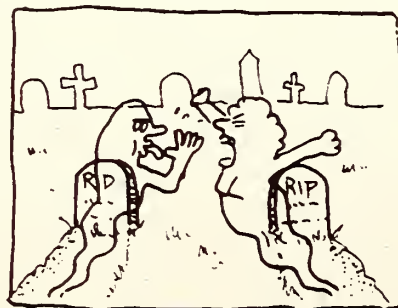
4. Ask some of your older relatives what they studied when they went to school. What did they dream of becoming when they grew up? What happened in their lives which made those dreams possible or impossible to fulfill? Where have they traveled? What unusual people have they met in their lives? What are the most important things they've learned in their lives?

5. What other people (friends, household workers, children) have been adopted into your family? Are they called cousins, aunts, etc.?



6. What important holidays are celebrated in the family and how? What are the different ways family members have celebrated national, religious, or family holidays? What are the traditional meals, decorations, and ritual customs associated with these occasions? What innovations have entered your family's holiday celebrations? Has your family ever created an entirely new holiday?

7. Is there a family cemetery or burial plot? Who is buried with whom? Who makes burial place decisions? What kind of information is recorded on the gravestones or grave markers? [See "Exploring Historic Cemeteries" by Ann Palkovich in the Winter 1998 issue of *AnthroNotes*.]



3. How did your parents, grandparents, or other relatives come to meet and marry? Are there any family stories of lost loves, jilted

8. Are there any family stories about mysterious, eccentric, notorious, or infamous characters in the family? Any family heroes from the past? What stories have been handed down about these special people? Do you think the infamy or fame of the ancestor has grown through time?



9. Have any historical events affected your family? For example, how did the family survive the Depression? How have past wars affected the family?

10. Does your family have any heirlooms, paintings of famous ancestors, objects of sentimental or monetary value which have been handed down? Are there stories connected to them? Do you know their origin or line of passage through the generations? Are there special tools that have been handed down? Does anyone use them today?

11. Does your family have photo albums, scrapbooks, slides, home movies? Do you know all the family members in these pictures? What can you find out about relatives who died before you were born? Whose responsibility in the family is the upkeep of the diaries, albums, etc.? When are they shared or displayed? Are they specially arranged, edited, designed?



12. Does the family hold reunions? When, where, and how often? Who organizes the reunion, and who comes? What occurs during the reunion and is a record kept?

13. Does the family have any special recipes that have been preserved in the family from past generations? Are there any stories connected to them?

14. Does the family have any unique expressions, folk sayings, or home remedies that have been passed down through the generations?



Basic Family Folklore Resources

Cook, Ann, Marilyn Gittell, and Herb Mark. 1976. *What Was it like When Your Grandparents Were Your Age?* Pantheon Books. (Text and numerous photographs depict life in the United States in the 1920s and 1930s.)

Dixon, Janet T. and Dora Flack. 1977. *Preserving Your Past; a Painless Guide to Writing Your Autobiography and Family History*. Doubleday and Co. (A how-to-do-it family history book with suggestions for the creative writing aspects of doing family history.)

The National Endowment for the Humanities. 1999. *My History is America's History: 15 Things You Can Do to Save America's Stories*. In partnership with the White House Millennium Council. (The guidebook includes 15 activity chapters; for example, "Playing Detective with Photographs," "Discovering Clues in Family Papers," "Uncovering History in the Attic," as well as a large section on ways to preserve family treasures and an excellent Resources Section.) For further information, visit the website: www.myhistory.org.

Zeitlin, Steven J., Amy Kotkin, and Holly Cutting Baker. *A Celebration of American Family Folklore*. Pantheon Books, 1982.

ARCHAEOLOGY SYMPOSIUM FOR TEACHERS

"Teaching the Past Through Archaeology" is a two-day symposium organized by the Smithsonian's Department of Anthropology and the Society for American Archaeology Public Education Committee, which will be held September 22 & 23, 2000 at the Smithsonian Institution.

Through a combination of lectures and workshops, teachers will learn exciting and creative ways of introducing archaeology into various social science and science curricula such as geography, history, social studies, and biology, as well as the importance of preserving our cultural heritage.

Lectures will cover the following topics: The Impact of El Niño on Prehistoric Populations in Amazonia; Bones Tell Tales: Searching for the Earliest Americans from Human Remains; The Vikings in the New World; Unveiling the African American Past; and Ancient Diseases, Ancient Civilizations.

The four workshops from which teachers will choose three are: Intrigue of the Past; The Uluburun Shipwreck Project: Interconnections Through Trade in the Late Bronze Age Mediterranean World; World Trees and Tree Stones: Classroom Lessons on Maya Archaeology; and Teaching with Historic Places.

The symposium will also include a panel presentation that will focus on archaeological resources, Internet communications, and ways to incorporate archaeology into the curriculum. The second day will conclude with a discussion period followed by a reception at the Smithsonian Castle.

The registration fee is \$75.00. To receive a program and an application form, contact: Ann Kaupp, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560-0112; (202) 357-1592; fax: (202) 357-2208; email: kaupp.ann@nsmnh.si.edu.



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1. To more widely disseminate original, recent research in anthropology in order to help readers stay current in the field;
2. To help those teaching anthropology utilize new materials, approaches, and community resources, as well as integrate anthropology into a wide variety of subjects; and
3. To create a national network of anthropologists, archaeologists, teachers, museum and other professionals interested in the wider dissemination of anthropology, particularly in schools.

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